

S Lukenbill, Nancy  
371.953 Gifted &  
Pllgt talented  
1983?

# GIFTED & TALENTED

**OFFICE OF PUBLIC INSTRUCTION**  
**State Capitol**  
**Helena, MT**

STATE DOCUMENTS COLLECTION

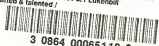
JAN 12 1990

MONTANA STATE LIBRARY  
1515 E. 6th AVE.  
HELENA, MONTANA 59620



**Nancy Lukenbill, Specialist**  
**Gifted & Talented Programs**

MONTANA STATE LIBRARY  
S 371.953 P11pt 1983? c.1 Lukens  
Gifted & talented /



3 0864 00065112 8

# Table of Contents

- I. MT School Law
- II. U.S. Office Definitions
- III. Characteristics
- IV. Identification
- V. Program Design
- VI. Curriculum Development
- VII. Evaluation
- VIII. Bibliography

- I. MT School Law
- II. U.S. Office Definitions
- III. Characteristics
- IV. Identification
- V. Program Design
- VI. Curriculum Development
- VII. Evaluation
- VIII. Bibliography





# SCHOOL LAWS OF MONTANA



## Part 9



### GIFTED and TALENTED CHILDREN

20-7-901. Definitions. As used in this part the following definitions apply:

(1) "Gifted and talented children" means children of outstanding abilities who are capable of high performance and require differentiated educational programs beyond those normally offered in public schools in order to fully achieve their potential contribution to self and society. The children so identified include those with demonstrated achievement or potential ability in a variety of worthwhile human endeavors.

(2) "Professionally qualified persons" means teachers, administrators, school psychologists, counselors, curriculum specialists, artists, musicians, and others with special training who are qualified to appraise pupils' special competencies.

History: En Sec. 1, Ch. 310, L. 1979.

20-7-902. School district programs to identify and serve the gifted and talented child. (1) A school district may identify gifted and talented children and devise programs to serve them.

(2) In identifying gifted and talented children, the school district shall:

(a) consult with professionally qualified persons and the parents of children being evaluated;

(b) consider a child's demonstrated or potential gifts or talents; and

(c) use comprehensive and appropriate assessment methods including objective measures and professional assessment measures.

History: En Sec. 2, Ch. 310, L. 1979.

20-7-903. (Effective July 1, 1984) Programs to serve gifted and talented children--compliance with board policy--funding. (1) The conduct of programs to serve gifted and talented children must comply with the policies recommended by the superintendent of public instruction and adopted by the board of public education.

(2) Proposals approved by the superintendent of public instruction in accordance with policies of the board of public education must be funded by money appropriated to the superintendent for that purpose.

(3) A school district shall match funds provided by the superintendent for a gifted and talented children's program with equal funds from other sources. "In kind" contributions may not be used to constitute such a match. Funds must be administered by the school district as provided in 20-9-507.

(4) The superintendent of public instruction may deduct reasonable costs of administration from the funds appropriated for the purposes of this part.

History: En Sec. 3, Ch. 310, L. 1979; amd. Sec. 2, Ch. 312, L. 1983.

20-7-904. (Effective July 1, 1984) Review and recommendations of proposals.  
(1) The policies of the board of public education must assure that program proposals submitted by school districts to the superintendent of public instruction contain:

(a) evidence that identification procedures are comprehensive and appropriate;

(b) a program description including stated needs and measurable objectives designed to meet those needs;

(c) evidence that the activities are appropriate and will serve to achieve the program objectives; and

(d) a method to evaluate the effectiveness of the program.

(2) School districts may request assistance from the staff of the superintendent in formulating program proposals.

(3) The superintendent of public instruction shall supervise and coordinate the programs for gifted and talented children by:

(a) recommending to the board of public education the adoption of those policies necessary to establish a planned and coordinated program; and

(b) establishing a procedure for review and approval of program proposals.

History: En Sec. 4, Ch. 310, L. 1979; amd. Sec. 3, Ch. 312, L. 1983.



Ed Argenbright  
Superintendent

cmw21

SR23884

## AREAS OF GIFTED AND TALENTED EDUCATION PROGRAMS

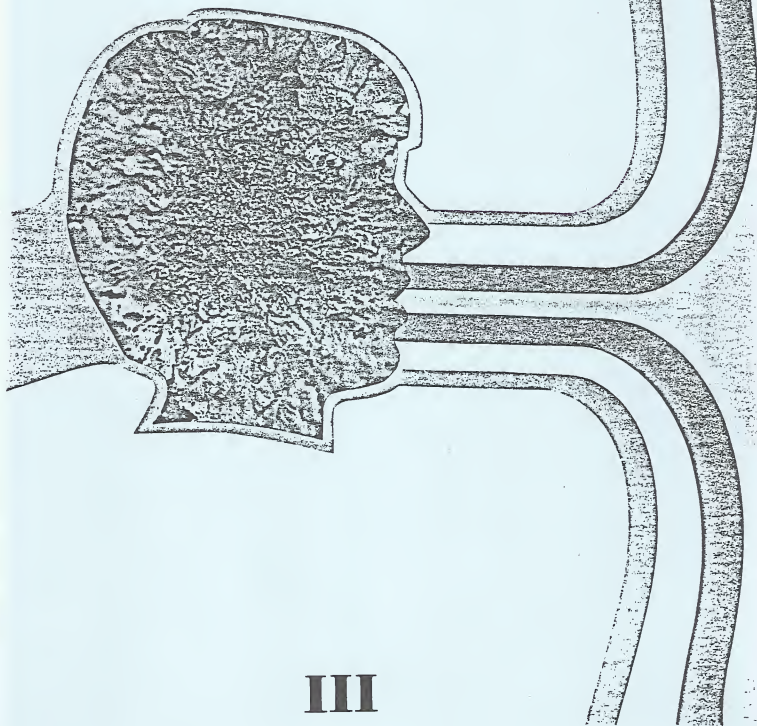
Gifted children are defined as those children who consistently excel or show the potential to consistently excel above the average in one or more of the following areas of human endeavor to the extent they need, and can profit from, specially planned educational services.

1. General Intellectual Ability. The child possessing general intellectual ability is consistently superior to that of other children in the school to the extent that he/she needs and can profit from specially planned educational services beyond those normally provided by the standard school program.
2. Specific Academic Aptitude. The child possessing a specific academic aptitude is that child who has an aptitude in a specific subject area that is consistently superior to the aptitudes of other children in the school to the extent he/she needs, and can profit from, specially planned educational services beyond those normally provided by the standard school program.
3. Creative Thinking. The creative thinking child is that child who consistently engages in divergent thinking that results in unconventional responses to conventional tasks to the extent that he/she needs and can profit from specially planned educational services beyond those normally provided by the standard school program.
4. Leadership Ability. The child possessing leadership ability is that child who not only assumes leadership roles but also is accepted by others as a leader to the extent that he/she needs and can profit from specially planned educational services beyond those normally provided by the standard school program.
5. Visual and Performing Arts Ability. The child possessing visual and performing arts ability is that child who, by his/her consistently outstanding aesthetic production in graphic arts, sculpture, music or dance, needs and can profit from specially planned educational services beyond those normally provided by the standard school program.





# CHARACTERISTICS



III



## CHARACTERISTICS OF THE GIFTED CHILD

- |  |  |
|--|--|
| I. Grasps and retains knowledge            | <ol style="list-style-type: none"><li>1. comprehends meanings</li><li>2. responds quickly and accurately</li><li>3. questions critically</li><li>4. transfers learnings to new situations</li></ol>  |
| II. Conveys ideas effectively              | <ol style="list-style-type: none"><li>1. follows logical sequence and order</li><li>2. has extensive vocabulary and uses it</li><li>3. is selective</li><li>4. is critical</li><li>5. is fluent</li></ol>                                      |
| III. Shows skill in abstract thinking      | <ol style="list-style-type: none"><li>1. makes generalizations</li><li>2. senses cause and effect</li><li>3. recognizes relationships</li><li>4. can understand and apply rules</li><li>5. foresees new possibilities</li></ol>                |
| IV. Uses wide variety of resources         | <ol style="list-style-type: none"><li>1. is versatile</li><li>2. is self-reliant when meeting problems</li><li>3. is ingenious in knowing when, where, and how to seek help</li></ol>  |
| V. Has creative and inventive power        | <ol style="list-style-type: none"><li>1. shows curiosity and originality</li><li>2. is alert to possibilities</li><li>3. enjoys experimentation</li><li>4. uses trial and error method</li><li>5. finds ways to extend his/her ideas</li></ol> |
| VI. Exhibits power to work independently   | <ol style="list-style-type: none"><li>1. shows ability to plan</li><li>2. shows ability to organize</li><li>3. shows ability to execute</li><li>4. shows ability to judge</li></ol>  |
| VII. Assumes and discharges responsibility | <ol style="list-style-type: none"><li>1. shows perseverance</li><li>2. shows desire to forge ahead</li><li>3. shows will to succeed</li></ol>  |
| VIII. Adjusts easily to new situations     | <ol style="list-style-type: none"><li>1. understands and accepts reasons for change</li><li>2. anticipates outcomes</li><li>3. maintains optimistic attitude toward new adventures</li><li>4. is challenged by new ideas</li></ol>             |
| IX. Has physical competence                | <ol style="list-style-type: none"><li>1. is alert</li><li>2. is active</li><li>3. is energetic</li><li>4. is free of nervous tensions</li><li>5. is generally healthy</li></ol>  |

X. Appreciates social values

1. senses right and wrong
2. respects the right of others
3. is willing to share
4. contributes constructively to group activities
5. maintains spurts of growth and changes in attitudes and behavior
6. is conscientious and truthful

XI. Establishes favorable relationships

1. has self-respect
2. has permanence of mood
3. has sense of humor
4. is friendly, helpful and cooperative

LIST OF CHARACTERISTICS  
CULTURALLY DIFFERENT GIFTED PUPILS

INTELLECTUAL ABILITY

1. Accelerated "mental" development relative to sociocultural and age peers.
2. Ability to integrate conflicting and discrepant cultural information.
3. Ability to recognize what is appropriate in different cultural systems and extrapolate and utilize knowledge from a variety of traditions.
4. Ability to cope with a variety of cultural settings, problem solving and reasoning in variety of languages.

CREATIVE ABILITY

1. Creative use of words and symbols in more than one language or tradition.
2. Creative use of language-development of own verbal games, songs, puns, etc.
3. Creative compensation for disadvantages-creative use of adversity-creating games, toys, vehicles with limited resources-restructuring available resources.
4. Innovative solutions, generating original ideas, intellectually challenging ideas of teachers, asking "why/why not."
5. Psycho-motor creativity, instantaneous decision making, integrating physical agility, problem solving, visual-motor skills to specific situations.
6. Creative divergent thinking-initiative, persistence, dominance, perseverance, strong sense of purpose.

SPECIFIC ACADEMIC ACHIEVEMENT

1. High achievement in a specific area - in depth, focused achievement, self-propelled and motivated-deep commitment to any area of learning.
2. High academic achievement in traditional academic areas relative to sociocultural and chronological peers.
3. High achievement and knowledge of cultural traditions other than the mainstream culture.

### LEADERSHIP ABILITY

1. Respect of peers in school and/or of own sociocultural group.
2. Recognized as leader outside of school and/or by persons in own sociocultural group.
3. Acceptance of responsibility as role model, able to organize group activities and influence behavior of others - trend setter.
4. Ability to inspire confidence in others, make people feel important and valued.
5. Initiates action, strong sense of identity, strong values and conviction. Courage to do things that are different, able to transcend own environment, may be viewed as obstreperous by school adults.
6. Ability to effectively challenge adults and/or to participate in equal status relationships with them.
7. Keen awareness of the group process and ability to manipulate.
8. Charismatic, humor, spontaneity, people oriented, emphatic.

### HIGH ACHIEVEMENT

1. High adaptive behavior in the home, community, peer group, community organizations.
2. Ability to produce consistently something outstanding and valued by own culture and/or subcultural group - creative use of symbols.
3. Distinguished contributions to the community, church, youth groups, scouts, etc.
4. Consistent ability to accept adult responsibilities in the family, community, etc.

### VISUAL AND PERFORMING ARTS

1. Ability to demonstrate talent in the visual or performing arts in the absence of training.
2. Demonstrating talent characteristic of the art forms of their own culture.
3. Mastery of the essence of own culture and ability to transmit that essence into humor, dance, music, entertainment, etc.
4. Ability at informal improvisation in the arts.

5. Ability to make use of limited resources by showing an experimental attitude, finding unusual outlets for their products.

OTHER AREAS

1. Outstanding psychosocial skills in interpersonal relations; facilitative behavior in groups, etc.
2. Outstanding commitment to traits needed to achieve as adults - initiative, strong convictions, perseverance, high motivation, positive self-concept, etc.

| <u>Nominees</u>      |              |             |
|----------------------|--------------|-------------|
| <u>Name of Pupil</u> | <u>Grade</u> | <u>Code</u> |
| 1. _____             | _____        | _____       |
| 2. _____             | _____        | _____       |
| 3. _____             | _____        | _____       |
| 4. _____             | _____        | _____       |



## CHARACTERISTICS OF CROW INDIAN GIFTED CHILDREN

### A child gifted in leadership or communication:

HARDIN SCHOOL DISTRICT

Is an eloquent speaker in his/her native language, English, or <sup>Hardin, Mt</sup> both;  
Is persuasive and able to communicate ideas;  
Is assertive, but not aggressive, doesn't offend other's feelings;  
Uses a communication system effectively, including gestures, intuition, details (sports, dance, storytelling, etc.);  
Listens attentively;  
Is tolerant of opposing viewpoints;  
Is intuitive, perceives which individuals with whom he/she is communicating;  
Takes the initiative in beginning an activity or project;  
Is chosen by peers as leader of a group, basketball team, committee, etc.

### A child gifted in creativity:

Creates original beadwork designs within established cultural parameters and traditions;  
Makes up original stories;  
Makes up songs;  
Draws well, showing ability to see things in their entirety and paying attention to details;  
Is open-minded about new experiences and ideas;  
Expresses self creatively using physical modes;  
Visualizes, sees pictures in mind when listening to a story;  
Produces imaginative, clever responses;  
Likes to explore, invent, discover;  
Makes up poems;  
Enjoys playing alone, can make up "script" for toys, games.

### An intellectually gifted child:

Understands and respects complex family and clan relationships and treats individuals the correct way;  
Knows his/her teasing clan and how to treat them;  
Understands and responds to more advanced humor than do peers;  
Displays a sense of community, knows place in community;  
Perceives the purpose of an occasion or ceremony;  
Is curious to the appropriate limit and understands the appropriateness;  
Keeps sacred things sacred, understands this at an early age;  
Displays ability to use the system;  
Pays attention to details;  
Displays ability to organize systems and groups of things (might play at having a giveaway, organizes all appropriate elements.);  
Sees depth of organization;  
Learns a song quickly and easily;  
Is perceptive, knows aerodynamics of an arrow by the way it feels, the twist of the feather; knows which horses are fast from physical characteristics;

### An intellectually gifted child:

Knows all the elements of a system, if one part is missing the system is ineffective (example: In dancing all of the elements must be present);  
Knows traditional designs and symbols;  
Displays acute visual perception, matches beads and shading to things in nature;  
Uses Crow, English, or both languages well;  
Pays attention when intellectually stimulated, challenged;  
Enjoys a long story with many details;  
Makes analogies, recognizes similarities between seemingly different objects, systems, etc.;  
Is sought out by others for help;  
Is able to listen to, understand, and apply complex instructions;  
Understands cultural import of his actions;  
Knows cultural norms and standards.



NATIVE AMERICAN GIFTED PROGRAM...TITLE IV-C ESEA

Karlene George, Program Director  
Judy Barth, Media Technician

North Kitsap School District  
150 High School Road South  
Poulsbo, Washington 98370

Native American Special Abilities Profile

(As selected by Klallam and Suquamish people,  
Kitsap County, Washington; December, 1978)

A PERSON WITH SPECIAL ABILITIES IN MUSIC CRAFTS, ATHLETICS OR OTHER  
ARTISTIC AREAS...

- has the ability and desire to practice and complete projects on his or her own.
- can reproduce or copy a traditional design or totem symbol in beadwork, carving or drawing.
- can recall old legends about landmarks.
- can make different kinds of baskets, each for its special purpose.
- physically strong and mentally alert.
- can use traditional form and vary and enhance it.
- can produce a variety of clever, imaginative responses (talking or doing).
- can make up a song of his/her own and sing it.
- is able to figure out strategies to help a team or group project.
- can sing an old tribal song
- can make up stories and poems.

A PERSON WHO HAS A GENERAL SPECIAL ABILITY IN ANY AREA IS...

- one who knows himself -- understands and is happy with what he/she is.
- one who cares about others -- shows them respect and love.

- one who goes to the limit of his/her ability -- try their best.
- one who maintains a level of clan or family pride by putting his/her best effort forward -- trying.
- one who accepts the discipline of practice -- and is willing to practice.
- one who keeps secret things secret -- has personal and religious integrity.

#### A PERSON WITH A SPECIAL ABILITY IN LEADERSHIP IS...

- a good mediator -- to help bring harmony to people and to unite them.
- one who accepts willingly the responsibility and discipline of leadership.
- able to recognize problems and figure out how to solve those problems.
- one who sets goals and has high expectations for those they teach or lead.
- one who makes sure that everyone has a chance for "input" -- even if it takes a long time.

#### A PERSON WITH A SPECIAL ABILITY IN LEARNING IS...

- patient and pays attention.
- able to hear and remember what is heard.
- one who encourages and nurtures others to explore, discover and who develops his/her own abilities too.
- able to see and remember what is seen.
- a contributor -- develops his/her unique abilities so that he/she may be able to share them with others.
- one who proves what he or she knows by what he/she does -- not by talking about it.

#### A PERSON WITH SPECIAL ABILITY IN SOCIAL SKILLS IS...

- willing to share whatever he/she has.
- one who cares about others and shows them love and respect.

- one who believes that elders are responsible for protecting and nurturing the "gifts of the spirit" in the children, and for guiding them to be the best they know how.
- able to share his or her life force/spirit with others.
- able to use words well to express thoughts and meanings.
- one who helps others without embarrassing them.

A PERSON WITH SPECIAL ABILITIES AS A HARVESTER, HUNTER, FISHERPERSON CAN...

- know his/her own physical abilities and what he or she can or can't do.
- find the correct path or trail or highway to a place -- has a good sense of direction.
- be physically strong enough to do what is required with confidence.
- recognize the characteristics of the seasons and understand what they indicate.
- know the kinds of conditions necessary for catching certain types of game.
- recognize danger and avoid it in the forest when hunting.
- see tracks and be able to tell to which animal they belong.
- know where certain wild berries and roots can be found.

Note: The Profile items were ranked by Klallam and Suquamish tribal members who made their selection from a total of 82 statements. Each special ability area (leadership, learning, etc.) was prioritized and refined to create an identification process for gifted Native Americans.



# UNDER ACHIEVEMENT

## Highly Gifted Underachievers

Table 3-1 The most common characteristics of gifted underachievers

|  |
|--|
| IQ of 140+ on Stanford Binet or WISC   |
| School work has been rather consistently incomplete  |
| Vast gap between qualitative level of oral and written work  |
| Test phobic, poor test results   |
| Profound interest in a single area in which she is "expert"  |
| School phobia or complete disinterest in attendance and participation  |
| Very low self-esteem and unhealthy self-concept producing:<br>difficulties coping emotionally<br>lack of self-confidence<br>inferiority feelings                               |
| Sincere belief that no one likes her (projection of self-hate)   |
| A very autonomous spirit, quite focused on self and resistant to influence   |
| Inability to function constructively in a group of any size  |
| Wide range of interests, mostly in the sciences and arts   |
| Tendencies to continually set goals and standards too high; e.g., unrealistic standards of complexity or aspirations for realism in art  |
| No apparent satisfaction from repeated demonstration of acquired skills—e.g., math facts and cursive writing—tasks that do not require higher levels of thinking or creativity |
| Not motivated by the usual devices—e.g., teacher enthusiasm, group interests, a "stimulating environment," and often not by praise or points awarded for "good behavior"       |

Table 3-2 Additional common characteristics of gifted underachievers

|  |
|--|
| Lack of academic initiative (as defined by school)   |
| A rigidity of interests, which translates into "I want to learn about the things I'm interested in!"   |
| Distractibility—inability to focus and to concentrate efforts constructively; a lack of selective perception when presented with multiple stimuli  |
| General hyperactivity, hypertensive behavior; several youngsters were placed on drug treatment by doctors diagnosing them as hyperactive           |
| General immaturity in all areas—physically, socially, and emotionally  |
| Very often young (fall babies)   |
| Chronic inattentiveness—"Just cannot listen and absorb"  |
| Psychomotor inefficiency, most often a visual-perception handicap  |
| Tendency to attribute success and failure to external control, believing she had no personal ability to achieve "success" in the classroom setting |
| Malingered, hypochondria, frequent illness resulting in excessive absences from school   |

## Highly Gifted Children Failing to Achieve in School

Table 3-3 General behavior patterns of gifted underachievers

| Aggressive, Hostile Response   | Withdrawal Response                                      |
|--|--|
| Refusal to comply with rules, requests   | No significant communication with peers or teachers      |
| Instead of working, moves about disrupting others  | Daydreams, wanders, doodles ... lives in a fantasy world |
| Vies for attention in a wide variety of ways   | Cannot work in groups—always withdraws alone somehow     |
| Rejects assignments as "Silly, I know it!" or "I don't want to ..."  | Will attempt to do little in work or class activity      |
| Exploits any freedom, lacks self-direction   | Will not even defend self                                |
| Alienates peers by constant aggression and derogatory attitudes toward them; excessive fighting and quarreling |  |

and previous teachers. In addition to those most common characteristics were other characteristics that, although less consistently present, were found with unusual frequency in this group of children. Those characteristics are listed in Table 3-2.

**Characteristic Behavior Patterns.** Two basic patterns of student behavior were easily identified in the Cupertino underachievers: aggression or withdrawal. Sample behaviors of the two contrasting patterns of behavior are listed in Table 3-3. Approximately three-fourths of the underachievers referred for special placement were of the aggressive type, indicating the teachers' discomfort with that type of child in the classroom. There may be many more youngsters who live out the withdrawal pattern and are not referred for special education because they do not interfere with classroom operations. This perhaps explains the low frequency of female referrals. Boys seem to be more inclined toward the aggressive pattern while girls seem to be more apt to be withdrawn. This sex difference undoubtedly is related to the cultural expectations and pressures upon the two sex roles. Since this program involved the most critically disturbed youngsters who were referred for special treatment, it raises the serious question of how many chronic underachievers exist among the highly gifted population, sliding by with average grades and spending a good amount of time in withdrawal.

**Other Characteristics.** The professional literature often attributes underachievement to family problems. Frequent interaction between the teacher and the parents in the UAG program revealed no

EXTRACTED FROM: *Giftedness, Conflict, and Underachievement*. Whitmore, Joanne, Allen and Bacon, Inc., Boston, 1962.

achieving success. Operationally, educators have defined underachievement as performance, judged either by grades or achievement test scores—or both—that is significantly below the student's measured or demonstrated potential for academic achievement. A significant difference between potential and actual performance levels generally has been considered to be a discrepancy of one or more years.

In an effort to devise more objective and systematic methods of identifying gifted underachievers, Gowan (1957) suggested that underachievement be defined as performance that places the student more than a full standard deviation below his ability standing in the same group. That formula meant that a student in the top third of his student reference group on measures of aptitude may be identified as an underachiever when he scores in the middle third of the group on achievement measures—and, a severe underachiever if he falls in the lowest third of the group. That formula for identification seems to have much practical value. More recently, some researchers have advocated the use of a statistical formula based on the calculation of  $z$  scores of the differences between reliable measures of ability and achievement. That may be a useful method of identification for research purposes, but it is dysfunctional as a method in the schools seeking to identify, at minimal cost in time and personnel, underachievers in need of special assistance.

Advocates of a more sophisticated statistical method of identification also tend to doubt that reliable measures of ability and achievement can be obtained with young children and therefore they often claim that it is impossible to identify underachievers in the early grades. Anyone teaching young gifted children regularly will have no difficulty identifying some underachievers. They will have observed exceptional mental abilities and an inability to perform satisfactorily (at grade level) on daily work, and usually also on standardized achievement tests. In the early grades one can readily observe significant gaps between the levels of thought processes and skills for written self-expression and completion of academic tasks. The teacher's attention is caught most often by the acute frustration and emotional stress that is experienced by the very bright young child who cannot keep up with his classmates and does not feel successful in the primary grades.

If our concern is to preserve and develop the intellectual potential of our children, it is imperative that we not become stymied by a desire for statistical precision and unquestionable reliability in measurement before educational needs are diagnosed and special treatment is offered to the child. A practical operational definition of underachievement that can be employed simply is highly valuable if

it results in early identification and intervention to prevent a loss of productive giftedness to our society.

It should be mentioned that researchers often have identified also, usually for comparison with underachievers, subjects labeled "overachievers." Such labels are based on the definitions of "achiever" as one who performs on achievement tests as predicted by indicators of aptitude, and "overachiever" as one who scores significantly higher than predicted by aptitude assessments. It is easy to debate the value of identifying a student as an overachiever, except possibly for the purpose of researching motivation in relation to levels of achievement. The subject of underachievement and the identification of underachievers is extremely important, however, on the practical base of the educational goal of facilitating the full development of all the talents and abilities an individual student possesses. Identification of the fact that a student has demonstrated exceptionally high aptitude can prevent the lowering of teacher expectations and guide the designing of a more appropriate educational program to reverse the pattern of underachievement.

**Kinds of Underachievement.** Researchers have suggested that there are different kinds of underachievement, or different criteria by which the underachiever's condition may be described. They have classified underachievers in terms of the duration of the problem and how it became known (Flegler, 1957; Shaw, 1961; Fine, 1967). To those categories it is very useful to add the criteria of scope and effects of the problem.

There are three kinds of underachievement defined by how the discrepancy between aptitude and achievement was revealed:

1. **Unknown**—performance on aptitude and achievement measures are consistently low, hiding the ability of the child who is functionally untestable; or the student's underachievement is hidden by "satisfactory" performance and the teachers have no evidence that the student is capable of much higher achievement.
2. **High aptitude scores but low grades and achievement test scores.**
3. **High standardized achievement test scores but low grades due to poor daily work, whether or not there are aptitude scores that indicate the student's ability.**

Underachievement has always been classified or described according to its duration:

1. **Temporary/situational**—the underachieving behavior has been precipitated by a temporary period of disturbance, such as divorcing parents, ill health, or a consuming new interest, or by a

Forms for identifying gifted children in need of special assistance at the junior high level were sent to all sixth-grade teachers. Twenty-three recommendations have been received—9 from the Miller complex, 8 from the Collins complex, and 6 from the Cupertino complex. The common needs of the 23 students as described by their present teachers are outlined below:

1. They are not "self-starters"—they need close supervision and monitoring by a teacher who can guide the development of work habits, organizational and study skills, concentration and perseverance to task completion. These students function satisfactorily only when in close relationship to a teacher who reinforces effort rather immediately.
2. Need for a flexible classroom structure which can adapt to their individual learning styles:
  - \* Most respond more successfully to oral rather than written work.
  - \* Some need more opportunities for individual tutorial work while others learn best through group work.
  - \* Some need the security of a definite structure with immediate reinforcements and assurances while others need more freedom to be self-directing than would be experienced in regular classes.
3. A lack of motivation to achieve in response to external evaluations and imposed curricula; they need ample opportunities for self-selection and self-evaluation, pursuit of interests, and experiences of genuine success more than failure.
4. A variety of specific academic needs:
  - \* Below-grade-level reading, perceptual/motor disability creating problems in writing, poor achievement with math "skills" (not concepts), and one case of bilingualism.
5. Socio-emotional needs requiring continuous counseling and structured opportunities to learn how to cope:
  - \* Frequently peer pressures or ostracizing have resulted in patterns of compensatory behavior which disrupts classrooms.
  - \* Weak social skills—students may have tendencies toward withdrawal or aggression.
  - \* Lack of self-confidence and presence of inferiority feelings are often observed.
  - \* Poor self-concept with negative expectations and inability to persevere due to fear of failure are common.
  - \* Very low tolerance for pressures to conform—"periods of almost complete non-function" are reported by teachers.
6. Special learning handicaps not previously mentioned: medical problems, e.g., cystic fibrosis, neurological dysfunctions often requiring medication to correct hyperactivity.

## PROPOSAL

These students need close relationship with one teacher who can counsel them and help them become integrated into the regular junior high program. Children qualified for an underachieving gifted program should be assigned to a teacher who will place him in one of the following plans:

- A. Working all day in learning centers with the underachieving gifted counseling teacher until ready to gradually move out successfully to regular classes in areas of his strengths.
- B. Beginning and ending the day at the learning center to set goals and to evaluate with the underachieving gifted teacher; assistance with study skills, diagnosis of special needs and reinforcement for progress could be provided.
- C. A combination of A and B involving frequent periods in the learning center throughout the day.

The counseling teacher would provide:

- A. Continual review of the curriculum needs of each individual and guidance in the selection of materials and the student's placement in classes.
- B. Communication with other personnel to facilitate the student's successful integration into the regular program.
- C. Group sessions to help individuals learn to problem-solve and to cope with social-psychological decisions related to his adjustment in school.

The teacher should be a man with experience teaching the gifted, and extensive knowledge of learning difficulties and their alternative treatments.



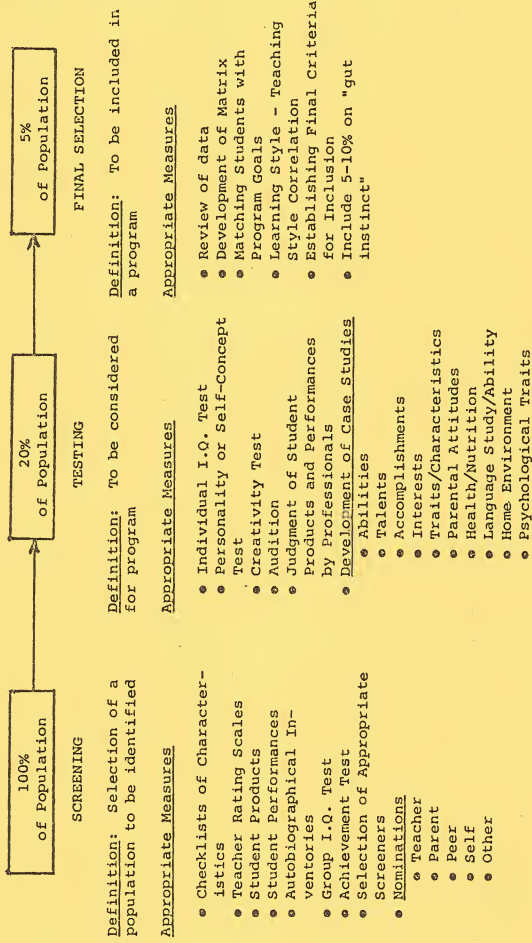
# **IDENTIFICATION**

**IV**

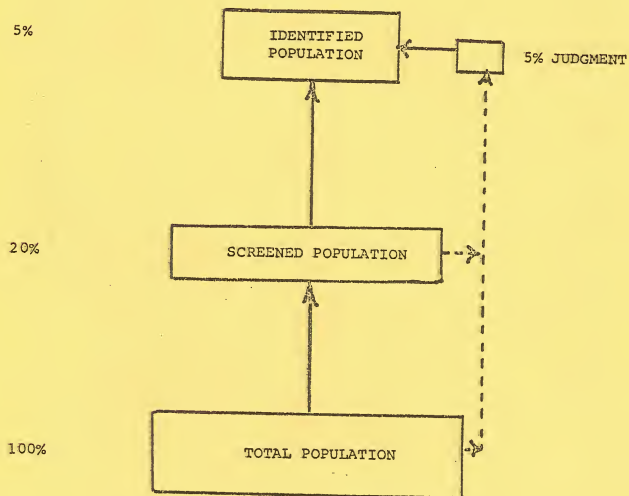




# IDENTIFICATION



Handout V/3 - "Identification Stages"



## IDENTIFICATION

There are certain student characteristics related to potential giftedness that can be more validly and reliably appraised by teachers, parents and others who have extended opportunities to observe students than by tests or other formal instruments. Some of the more important ones of these are:

1. Student's use of language. This includes such things as range of vocabulary, precision in the use of words, and complexity of sentence structure. Although these can be appraised in a test situation, one obtains a better appraisal of the level of habitual use of language through observation in a wide variety of everyday situations.
2. Quality of student's questions. Most children ask questions, and some children ask many questions. Although it is true that bright children typically ask many questions, it is the quality rather than the number of questions that discriminates most sharply between the potentially gifted child and other children. One wants to look at the unusualness of a question in relation to age or grade or the insightfulness of a question, i.e., indications that the individual has grasped the central nature of the phenomenon, or indications that the individual is relating the present task or situation to other experiences.
3. Quality of examples, illustrations, or elaborations that a student uses in explaining something or in describing events or in telling stories. Not only do exceptional students have a good command of language, but they also tend to use examples that are apt and original or to produce unusual analogies to illustrate points. Some students have a good command of language, but they also tend to use examples that are apt and original or to produce unusual analogies to illustrate points. Some students show unusual ability to translate verbal materials into pictorial modes or models or schematic diagrams. All these behaviors indicate a high level of understanding of the material that the student is using, ability to communicate ideas, and originality.
4. Student's use of quantitative expressions and quantitative reasoning. An example to illustrate this comes from the writer's experience in observing a kindergarten class where the students were playing a game in which each round resulted in the elimination of one child. After the game had progressed for several rounds, the teacher asked the children, "Are there more girls left in the game or more boys?" One child responded, "There are only one-half as many boys left as girls." Not only was the response correct, it was also a highly unusual quantitative response for a kindergarten child to make. Some children exhibit the ability to translate rather lengthy, sometimes complex, verbal material into quantitative terms. The ability to do this kind of translation requires a level of abstraction and facility with quantitative expression that is important to identify.

5. Student's ability to devise or adopt a systematic strategy for solving problems and to change the strategy if it is not working. This ability discriminates between excellent problem-solvers and average problem-solvers. Children who are exceptional in cognitive development tend to have mastery of a large number of strategies for attacking novel or difficult problems and tend to be able to evaluate the effectiveness of the strategy as they work on the problems and change strategies when the one they are using does not appear to be working. Other children either have no systematic strategy or only one strategy, which they persist in using, even though it should be apparent to them that it is not working.
6. Students with special skills exhibit that they are unusual for their age or grade. The first five categories listed relate primarily to verbal, quantitative, or problem-solving skills. However, an observant teacher, parent, or other adult may notice children doing other kinds of things that are quite unusual for their age or grade. For example, the writer saw a first-grade child during a free activity period drawing in perspective, which is quite unusual for a child of that age. There are numerous opportunities to observe such things as skill in expressive movement, artistry in mimicry of dramatization, and originality in design or model building or art.
7. Student's innovative use of common materials in the classroom or outside of it. Some students show exceptional ingenuity in using everyday materials in new ways or adapting or combining common materials to serve quite different purposes from those for which the materials were originally designed. This type of ingenuity is a good indicator of creativity and originality as well as problem-solving.
8. Student's breadth of information. There are numerous opportunities both in and out of the classroom to observe the range of topics or areas in which a student appears to have some knowledge. The breadth of information that a student has is usually a good indicator of the variety of her or his interests. It is also a good indicator of effective long-term memory and the store of information a student has, both of which are strongly related to problem-solving ability.
9. Student's depth of information in a particular area. Some students develop an extensive knowledge about some particular area such as space, birds, art, or music. A student who has gained such an extensive knowledge has probably done so on his or her own as a result of an extensive long-term interest. Like breadth of information, depth of information is a good indicator of effective long-term memory and store of information, both related to problem-solving ability.
10. Student's collections of materials or hobbies. Exceptional children tend to have hobbies or to make collections of materials that are quite different from those of typical children of their age or grade group. For example, a potentially gifted fourth-grade boy may have a collection of photographs of spiders' webs, whereas other fourth-grade boys collect pictures of baseball players. Sometimes the content of the collections may be the same, but the potentially gifted child organizes his or her collection in a more systematic or novel way than does the typical child. Parents are particularly good sources of information about these kinds of things.

11. Student's persistence on uncompleted tasks. Potentially gifted students tend to have a high level of desire to reach closure on a task or problem. They want to continue to work on uncompleted tasks and resist interruptions. They will use play time or miss meals or delay going to bed to complete something if they are permitted to do so. Other children do not seem to be bothered by leaving a task or problem before it is solved. They may work on the task during the allotted time but do not come back to the task or spend extra time of their own to complete it.
12. Student's absorption in intellectual tasks. Gifted students tend to focus intensively on intellectual tasks and become so absorbed in them that they are completely unaware of everything else that is going on around them or of the passage of time. When they are working on intellectual problems, they are highly resistant to distraction.
13. Extensiveness of student's exploratory behavior. Gifted students tend to be curious. As a result, they tend to engage in intensive exploratory activities when they see new materials or devices or face novel situations. Their exploratory activities are not only intensive, they are also purposeful, i.e., directed toward eliciting information about the materials, devices, or situations.
14. Student's criticalness of his or her own performance. Recent research on problem-solving indicates that one of the characteristics that discriminates excellent problem-solvers from average or poor problem-solvers is the ability of the former to evaluate their solutions objectively and realistically. Excellent problem-solvers appear to have an inner set of standards to judge the quality of their performance, which they constantly use and constantly refine. This type of self-criticism is not a reflection of false self-modesty but rather an indicator of the ability to look at oneself and the performance in an objective, analytical way.
15. Student's preferences for complexity, difficulty and novelty in tasks. Potentially gifted students tend to prefer to work at tasks that are complex and difficult. When permitted to choose the tasks or problems on which they will work, they most frequently choose the most complex or difficult ones or ones that present new challenges to them.



## TEACHER NOMINATION FORM

### CHARACTERISTICS OF G/T STUDENTS

#### A. INTELLECTUALLY OR ACADEMICALLY GIFTED:

- 1) HAS VOCABULARY OR KNOWLEDGE IN A SPECIFIC AREA THAT IS UNUSUALLY ADVANCED FOR AGE OR GRADE.
- 2) HAS KNOWLEDGE ABOUT THINGS OF WHICH OTHER CHILDREN ARE UNAWARE.
- 3) GRASPS CONCEPTS QUICKLY, EASILY, WITHOUT MUCH REPETITION, Bored with routine tasks and may refuse to do rote homework.
- 4) RECOGNIZES RELATIONSHIPS AND COMPREHENDS MEANINGS. May make jokes or puns at inappropriate times.
- 5) HAS UNUSUAL INSIGHT INTO VALUES AND RELATIONSHIPS. May perceive injustices and assertively oppose them.
- 6) ASKS MORE PROVOCATIVE QUESTIONS ABOUT THE CAUSES AND REASONS FOR THINGS. May refuse to accept authority and be non-conforming.
- 7) EVALUATES FACTS, ARGUMENTS, AND PERSONS CRITICALLY. May be self-critical, impatient or critical of self and others, including the teacher.
- 8) ENTHUSIASTICALLY GENERATES IDEAS OR SOLUTION TO PROBLEMS AND QUESTIONS. May dominate others because of abilities.
- 9) HAS INTENSE, OFTEN DIVERSE SELF-DIRECTED INTERESTS. May be difficult to get involved in topics he/she is not interested in.
- 10) PREFERS TO WORK INDEPENDENTLY. May be highly individualistic and seem stubborn.

PLEASE NOMINATE 3 TO 5 STUDENTS WHO CONSISTENTLY DISPLAY SEVERAL OF THESE CHARACTERISTICS. KEEP IN MIND SOME OF THE MORE "DIFFICULT" CHARACTERISTICS IN ITALICS.

|       |       |
|-------|-------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

DEVELOPED BY E. SUSANNE RICHERT, PH.D., EIC-SOUTH, N. J. DEPT. OF ED.

## TEACHER NOMINATION FORM

### B. GIFTED IN CREATIVE/PRODUCTIVE THINKING:

- 1) PRODUCES MANY AND VARIED SOLUTIONS TO PROBLEMS.
- 2) FLEXIBLE. Has high tolerance of disorder or ambiguity. May be impatient with details or restrictions.
- 3) IS HIGHLY ORIGINAL, PLAYFUL, IMAGINATIVE. Capable of fantasy, that is often sustained.
- 4) CAPACITY FOR TASK COMMITMENT IN AREAS OF INTEREST. May resist working on projects he/she is not interested in. Bored with routine or repetitive tasks.
- 5) USES IMAGINATION AND FANTASY IN SOLVING PERSONAL AND UNIVERSAL PROBLEMS (I.E. AN IMAGINARY PLAYMATE, INVENTING CURES FOR DISEASE, POVERTY, SOLVING ENERGY CRISIS, ETC.) May be considered wild or silly by peers or teachers.
- 6) KEEN SENSE OF HUMOR AND OFTEN PERCEIVES HUMOR IN SITUATIONS OTHERS ARE UNAWARE OF. May make jokes at inappropriate times.
- 7) TAKES INTELLECTUAL AND EMOTIONAL RISKS IN EXPRESSING OR TRYING OUT ORIGINAL IDEAS. DOES NOT FEAR BEING DIFFERENT. May be viewed unrealistic "crazy" or too aggressive.
- 8) INTENSE FEELINGS AND OPINIONS THAT HE/SHE MAY BE UNINHIBITED IN EXPRESSING.
- 9) PREFERS TO WORK INDEPENDENTLY. May be highly individualistic non-conforming and seem stubborn.
- 10) INTENSELY CURIOUS ABOUT MANY THINGS. May interrupt or ignore class activities to pursue interests.
- 11) SHOWS EMOTIONAL AND ESTHETIC SENSITIVITY.

PLEASE NOMINATE 3 TO 5 STUDENTS WHO CONSISTENTLY DISPLAY SEVERAL OF THESE CHARACTERISTICS. KEEP IN MIND SOME OF THE MORE "DIFFICULT" CHARACTERISTICS IN ITALICS.

|       |       |
|-------|-------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

# Checklist for Kindergarten\*

Directions: Place an X in the square which BEST describes the pupil you are recommending for screening or testing for the gifted/talented program. If the behavior has not been observed, mark *neither* square.

The pupil . . .

|                         |  | YES | NO |
|-------------------------|--|-----|----|
| VERBAL                  | 1. . . is able to read above grade level 1.5.  |     |    |
|                         | 2. . . correctly uses words indicating relationships such as up-down, top-bottom, big-little, far-near.                            |     |    |
| MATHEMATICAL            | 1. . . can repeat five digits forward and reversed.  |     |    |
|                         | 2. . . can make sets using items to count (set of 10 plastic chips).   |     |    |
| CREATIVITY              | 1. . . interprets stories or pictures in own words.  |     |    |
|                         | 2. . . can predict or complete outcomes for a story.   |     |    |
|                         | 3. . . displays curiosity by asking many questions and by other similar behaviors.   |     |    |
|                         | 4. . . explores new ideas or invents new ways of saying and telling.   |     |    |
| PSYCHOMOTOR/<br>SPATIAL | 1. . . shows coordination by being able to bounce a ball or tie shoe-laces.  |     |    |
|                         | 2. . . can complete a familiar picture by drawing the missing parts in their proper perspective.                                   |     |    |
|                         | 3. . . hears likeness and differences in the beginning of words; e.g., hill-bill, feet-treat, boat-coat.                           |     |    |
| BEHAVIORAL/<br>SOCIAL   | 1. . . readily adapts to new situations; is flexible in thinking and action; seems undisturbed when the normal routine is changed. |     |    |
|                         | 2. . . seeks new tasks and activities.   |     |    |
|                         | 3. . . tends to dominate others and generally directs the activity in which he or she is involved.                                 |     |    |

OTHER OBSERVATIONS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\*Adapted from materials prepared for Dade County, Florida, Public Schools, James Miley, Coordinator for the Gifted.

# Checklist for Grade 1\*

Directions: Place an X in the square which BEST describes the pupil you are recommending for screening or testing for the gifted/talented program. If the behavior has not been observed, mark *neither* square.

The pupil . . .

|                     |   | YES | NO |
|---------------------|---|-----|----|
| VERBAL              | 1. . . reads two years above grade level.   |     |    |
|                     | 2. . . has a well-developed vocabulary.   |     |    |
|                     | 3. . . can create a short story from a familiar object.   |     |    |
|                     | 4. . . interprets stories and pictures in own words.  |     |    |
|                     | 5. . . displays curiosity by asking varied questions.   |     |    |
|                     | 6. . . questions critically.  |     |    |
| MATHEMATICAL        | 1. . . recognizes sequence and the number of steps in a specified direction.                                      |     |    |
|                     | 2. . . forms sets and subsets.  |     |    |
|                     | 3. . . understands the concepts of place value.   |     |    |
| PSYCHOMOTOR/SPATIAL | 1. . . can complete a familiar picture with the missing parts in their appropriate perspective.                   |     |    |
|                     | 2. . . performs well in a physical activity with rules.   |     |    |
| BEHAVIORAL          | 1. . . can be independent in work and play habits.  |     |    |
|                     | 2. . . demonstrates a flexibility in thinking patterns and routine.   |     |    |
|                     | 3. . . seeks and follows through on motivating tasks or hobbies.  |     |    |
|                     | 4. . . tends to organize things, activities, people.  |     |    |
| SOCIAL              | 1. . . is self-sufficient with pupils own age, and/or adults; seems comfortable when asked to show work to class. |     |    |
|                     | 2. . . has a vivid imagination and enjoys sharing "stories" with others.  |     |    |

OTHER OBSERVATIONS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\*Adapted from materials prepared for Dade County, Florida, Public Schools, James Miley, Coordinator for the Gifted.

# Checklist for Grades 2-6\*

Directions: Place an **X** in the square which **BEST** describes the pupil you are recommending for screening or testing for the gifted/talented program. If the behavior has not been observed, mark *neither* square.

The pupil . . .

|            |   | YES | NO |
|------------|---|-----|----|
| LEARNING   | 1. . . is verbally expressive, creative.  |     |    |
|            | 2. . . exhibits knowledge about a variety of topics beyond the usual interests of age-peers.  |     |    |
|            | 3. . . demonstrates an understanding of underlying principles; can generalize about events, people or things; looks for similarities and differences. |     |    |
|            | 4. . . tries to understand complicated material by "organizing" it; reasons things out; sees logical, common-sense answers.                           |     |    |
| MOTIVATION | 1. . . is easily bored with routine tasks.  |     |    |
|            | 2. . . prefers to work independently; needs minimal direction from teachers.  |     |    |
|            | 3. . . has tendency to organize people, things and situations.  |     |    |
|            | 4. . . is positive and zealous in beliefs.  |     |    |
| LEADERSHIP | 1. . . carries responsibility well; follows through with tasks and usually does them well.  |     |    |
|            | 2. . . seems respected by classmates.   |     |    |
|            | 3. . . is self-confident with children own age as well as adults; seems comfortable when asked to show work to the class.                             |     |    |
|            | 4. . . is shy, responding generally when called upon.   |     |    |
|            | 5. . . is "bossy" with peers.   |     |    |
| CREATIVITY | 6. . . adapts readily to new situations; is flexible.   |     |    |
|            | 1. . . displays curiosity about things.   |     |    |
|            | 2. . . generates a large number of ideas or solutions; often offers unique, clever responses.   |     |    |
|            | 3. . . is a high risk taker.  |     |    |
|            | 4. . . displays a keen sense of humor.  |     |    |
|            | 5. . . criticizes constructively.   |     |    |

\*Adapted from materials prepared for Dade County, Florida, Public Schools, James Miley, Coordinator for the Gifted.



# SCALE FOR RATING BEHAVIORAL CHARACTERISTICS OF SUPERIOR STUDENTS

Joseph S. Renzulli/Robert K. Hartman

Name-----Date-----

School-----Grade-----Age-----  
Years Months

Teacher or person completing this form?-----

How long have you known this child?-----Months

DIRECTIONS. These scales are designed to obtain teacher estimates of a student's characteristics in the areas of learning, motivation, creativity, and leadership. The items are derived from the research literature dealing with characteristics of gifted and creative persons. It should be pointed out that a considerable amount of individual differences can be found within this population; and therefore, the profiles are likely to vary a great deal. Each item in the scales should be considered separately and should reflect the degree to which you have observed the presence or absence of each characteristic. Since the four dimensions of the instrument represent relatively different sets of behaviors, the scores obtained from the separate scales should not be summed to yield a total score. Please read the statements carefully and place an X in the appropriate place according to the following scale of values:

1. If you have seldom or never observed this characteristic.
2. If you have observed this characteristic occasionally
3. If you have observed this characteristic to a considerable degree.
4. If you have observed this characteristic almost all of the time.

Space has been provided following each item for your comments.

SCORING. Separate scores for each of the three dimensions may be obtained as follows;  
Add the total number of X's in each column to obtain the "Column Total."  
Multiply the Column Total by the "Weight" for each column to obtain the  
"Weighted Column Total."  
Sum the Weighted Column Totals across to obtain the "Score" for each  
dimension of the scale.  
Enter the Scores below.

Learning Characteristics.....  
Motivational Characteristics.....  
Creativity Characteristics.....  
Leadership Characteristics.....

# Scales for the Rating Behavior Characteristics of Superior Students

Joseph S. Renzulli/Linda H. Smith/Alan J. White/Carolyn M. Callahan/Robert K. Hartman

Name \_\_\_\_\_ Date \_\_\_\_\_

School \_\_\_\_\_ Grade \_\_\_\_\_ Age \_\_\_\_\_

Teacher or person completing this form \_\_\_\_\_

How long have you known the child? \_\_\_\_\_ Months \_\_\_\_\_

## Part I: Learning Characteristics

- |   | Seldom<br>or Never       | Occasionally             | Considerably             | Almost<br>always         |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. Has unusually advanced vocabulary for age or grade level; uses terms in a meaningful way; has verbal behavior characterized by "richness" of expression, elaboration, and fluency.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Possesses a large storehouse of information about a variety of topics (beyond the usual interests of youngsters his age.)  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Has quick mastery and recall of factual information.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Has rapid insight into cause-effect relationships; tries to discover the how and why of things; asks many provocative questions (as distinct from informational or factual questions); wants to know what makes things (or people) "tick." | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Has a ready grasp of underlying principles and can quickly make valid generalizations about events, people, or things; looks for similarities and differences in events, people, and things.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Is a keen and alert observer; usually "sees" or "gets" more out of a story, film, etc. than others.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Reads a great deal on his own, usually prefers adult level books; does not avoid difficult material; may show a preference for biography, autobiography, encyclopedias, and atlases.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Tries to understand complicated material by separating it into its respective parts; reasons things out for himself; sees logical and common sense answers.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Add Column Total ☐ ☐ ☐ ☐

Multiply by Weight ☐ 1 ☐ 2 ☐ 3 ☐ 4

Add Weighted Column Totals ☐ > ☐ ☐ > ☐

Total ☐

# Scales for the Rating Behavioral Characteristics of Superior Students

Joseph S. Renzulli/Linda H. Smith/Alan J. White/Carolyn M. Callahan/Robert K. Hartman

Name \_\_\_\_\_ Date \_\_\_\_\_

School \_\_\_\_\_ Grade \_\_\_\_\_ Age \_\_\_\_\_

Teacher or person completing this form \_\_\_\_\_

How long have you known the child? \_\_\_\_\_

## Part II: Motivational Characteristics

- |   | <div>-Seldom<br/>or never</div> | <div>-Occasionally</div> | <div>-Considerably</div> | <div>-Almost<br/>always</div> |
|---|---------------------------------|--------------------------|--------------------------|-------------------------------|
| 1. Becomes absorbed and truly involved in certain topics or problems; is persistent in seeking task completion. (It is sometimes difficult to get him to move on to another topic.) | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      |
| 2. Is easily bored with routine tasks.  | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      |
| 3. Needs little external motivation to follow through in work that initially excites him.   | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      |
| 4. Strives toward perfection; is self critical; is not easily satisfied with his own speed or products.   | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      |
| 5. Prefers to work independently; requires little direction from teachers.  | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      |
| 6. Is interested in many "adult" problems such as religion, politics, sex, race- more than usual for age level.   | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      |
| 7. Often is self assertive (sometimes even aggressive) stubborn in his beliefs.   | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      |
| 8. Likes to organize and bring structure to things, people, and situations.   | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      |
| 9. Is quite concerned with right and wrong, good and bad, often evaluates and passes judgment on events, people, and things.  | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      |

Add Column Total ☐ ☐ ☐ ☐

Multiply by Weight ☐ 1 ☐ 2 ☐ 3 ☐ 4

Add Weighted Column Totals ☐ > ☐ > ☐ > ☐

Total ☐

Scales for the Rating Behavioral Characteristics of Superior Students

Joseph S. Renzulli/Linda H. Smith/Alan J. White/Carolyn M. Callahan/Robert K. Hartman

|  |                       |
|--|-----------------------|
| Name _____                                   | Date _____            |
| School _____                                 | Grade _____ Age _____ |
| Teacher or person completing this form _____ |                       |
| How long have you known the child? _____     | Months _____          |

Part III: Creativity Characteristics

|   | <i>Seldom<br/>or never</i> | <i>Occasionally</i>      | <i>Considerably</i>      | <i>Almost<br/>always</i> |
|---|----------------------------|--------------------------|--------------------------|--------------------------|
| 1. Displays a great deal of curiosity about many things; is constantly asking questions about anything and everything.  | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Generates a large number of ideas or solutions to problems and questions; often offers unusual ("way out"), unique, clever responses.  | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Is uninhibited in expressions of opinion; is sometimes radical and spirited in disagreement; is tenacious.   | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Is a high risk taker; is adventurous and speculative.  | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Displays a good deal of intellectual playfulness; fantasizes; imagines ("I wonder what would happen if..."), manipulates ideas (i.e. changes, elaborates upon them); is often concerned with adapting, improving and modifying institutions, objects, and systems. | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Displays a keen sense of humor and sees humor in situations that may not appear to be humorous to others.  | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Is unusually aware of his impulses and more open to the irrational in himself (freer expression of feminine interest for boys, greater than usual amount of independence for girls); shows emotional sensitivity.  | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Is sensitive to beauty; attends to aesthetic characteristics of things.  | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Nonconforming; accepts disorder; is not interested in details; is individualistic; does not fear being different.  | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Scales for the Rating Behavioral Characteristics of Superior Students

Joseph S. Renzulli/Linda H. Smith/Alan J. White/Carolyn M. Callahan/Robert K. Hartman

|  |              |           |
|--|--------------|-----------|
| Name _____                                   | Date _____   |           |
| School _____                                 | Grade _____  | Age _____ |
| Teacher or person completing this form _____ |              |           |
| How long have you known the child? _____     | Months _____ |           |

Part IV : Leadership Characteristics

|  | <i>Seldom<br/>or never</i> | <i>Occasionally</i>      | <i>Considerably</i>      | <i>Almost<br/>always</i> |
|--|----------------------------|--------------------------|--------------------------|--------------------------|
| 1. Carries responsibility well; can be counted on to do what he has promised and usually does it well.                                 | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Is self confident with children his own age as well as adults, seems comfortable when asked to show his work to the class.          | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Seems to be well liked by his classmates.   | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Is cooperative with teacher and classmates; tends to avoid bickering and is generally easy to get along with.                       | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Can express himself well; has good verbal facility and is usually well understood.  | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Adapts readily to new situations; is flexible in thought and action and does not seem disturbed when the normal routine is changed. | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Seems to enjoy being around other people; is sociable and prefers not to be alone.  | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Tends to dominate others when they are around; generally directs the activity in which he is involved.                              | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Participates in most social activities connected with the school; can be counted on to be there if anyone is.                       | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

(continued from preceding page)

10. Criticizes constructively; is unwilling to accept authoritarian pronouncements without critical examination.

Seldom  
or never

Occasionally

Considerably

Almost  
always

|                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|--------------------------|--------------------------|

Add Column Total

|                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|--------------------------|--------------------------|

Multiply by Weight

|   |   |   |   |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
|---|---|---|---|

Add Weighted Column Totals

|                          |   |                          |   |                          |   |                          |
|--------------------------|---|--------------------------|---|--------------------------|---|--------------------------|
| <input type="checkbox"/> | > | <input type="checkbox"/> | > | <input type="checkbox"/> | > | <input type="checkbox"/> |
|--------------------------|---|--------------------------|---|--------------------------|---|--------------------------|

Total

|   |
|---|
| • |
|---|

PEER IDENTIFICATION - CREATIVITY - ELEMENTARY

Pretend our class found a puppy on the playground.

- A. Which three students would be most likely to think up lots of names for the puppy?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

Which three would make up the most unusual names?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

Which three would think of names no one else would think of?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

Which three probably would come up with the name we would finally decide on?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

- B. Which three students would be most likely to write a story about the puppy?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

- C. Which three students would probably think up different ways to teach the puppy a trick?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

- D. If we design a collar for our puppy, which three students would probably come up with the most designs for a collar?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

the fanciest collar?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

the most unusual collar?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

- E. Which three students would make the most suggestions of what could be done with the puppy?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

- F. Which three would give the teacher the most reasons for allowing the dog to come into the classroom?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

PEER IDENTIFICATION - CREATIVITY - SECONDARY

Think about the students in our class. Answer the following questions as completely as possible.

Which three students are the most curious about many things?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

have the most ideas and solutions to problems?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

don't seem to care what others think about what they say?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

likes to take chances?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

have the most fun imagining about situations and things?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

most sensitive to the feelings and concerns of others?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

have the best sense of humor?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

are aware of and enjoys beautiful things?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

are not concerned with details?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

do not care if others think of them as being different?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

are real individuals?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

are apt to question authority?

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

# PARENT INVENTORY

NAME \_\_\_\_\_ DATE \_\_\_\_\_  
 SCHOOL \_\_\_\_\_ GRADE \_\_\_\_\_  
 BIRTHDATE \_\_\_\_\_

A. What special talents or skills does your child have? \_\_\_\_\_

Give examples of behavior that illustrates this. \_\_\_\_\_

B. Check the following items as best describes your child as you see him or her.

|  | Little | Some | A Great Deal |
|--|--------|------|--------------|
| 1. Is alert beyond his years   |        |      |              |
| 2. Likes school  |        |      |              |
| 3. Has interests of older children or of adults in games and reading.    |        |      |              |
| 4. Sticks to a project once it is begun                                  |        |      |              |
| 5. Is observant  |        |      |              |
| 6. Has lots of ideas to share  |        |      |              |
| 7. Has many different ways of solving problems                           |        |      |              |
| 8. Is aware of problems others often do not see                          |        |      |              |
| 9. Uses unique and unusual ways of solving problems                      |        |      |              |
| 10. Wants to know how and why  |        |      |              |
| 11. Likes to pretend   |        |      |              |
| 12. Other children call him/her to initiate play activities              |        |      |              |
| 13. Asks a lot of questions about a variety of subjects                  |        |      |              |
| 14. Is not concerned with details  |        |      |              |
| 15. Enjoys and responds to beauty  |        |      |              |
| 16. Is able to plan and organize activities                              |        |      |              |
| 17. Has above average coordination, ability & ability in organized games |        |      |              |
| 18. Often finds and corrects own mistakes                                |        |      |              |
| 19. Others seem to enjoy his/her company                                 |        |      |              |
| 20. Makes up stories and has ideas that are unique                       |        |      |              |

# PARENT INVENTORY (Cont.)

|  | Little | Some | A Great Deal |
|--|--------|------|--------------|
| 21. Has a wide range of interests                            |        |      |              |
| 22. Gets other children to do what he/she wants              |        |      |              |
| 23. Likes to play organized games and is good at them        |        |      |              |
| 24. Enjoys other people and seeks them out                   |        |      |              |
| 25. Is able and willing to work with others                  |        |      |              |
| 26. Sets high standards for self                             |        |      |              |
| 27. Chooses difficult problems over simple ones              |        |      |              |
| 28. Is able to laugh at himself (if necessary)               |        |      |              |
| 29. Likes to do many things and participates whole-heartedly |        |      |              |
| 30. Likes to have his/her ideas known                        |        |      |              |

C. Reading interests (favorite type of books and/or titles of favorite books) \_\_\_\_\_

D. Favorite school subject \_\_\_\_\_

E. General attitude toward school \_\_\_\_\_

F. Hobbies and special interests (collections, dancing, making models, swimming, singing, painting, cooking, sewing, drama, etc.) \_\_\_\_\_

G. What special lessons, training or learning opportunities does your child have outside of school \_\_\_\_\_

H. What are some of the influences at home or at school that may negatively influence your child's performance in school \_\_\_\_\_

I. What other things would you like us to know that would assist us in planning a program for your child \_\_\_\_\_

J. Favorite playtime, leisure time activity \_\_\_\_\_

On the checklist the following items identify the different talent areas.

GENERAL INTELLIGENCE: 1, 2, 3, 5, 8, 10, 13, 16, 18, 21, 26, 27

CREATIVE THINKING: 6, 7, 9, 11, 14, 20, 28

LEADERSHIP: 12, 19, 22, 24, 25, 29, 30

## PARENT NOMINATION FORMS

Sample Parent Nomination Form  
at the Early Childhood Level

FOR SCHOOL USE

ONLY

TR \_\_\_\_\_

TI \_\_\_\_\_

Name of Student \_\_\_\_\_ Age \_\_\_\_\_

Address \_\_\_\_\_ School \_\_\_\_\_ Grade \_\_\_\_\_

Parent's Name \_\_\_\_\_

Instructions: In relationship to the typical child in your neighborhood, please circle a number for each item which best describes your child:

5- has this trait to a high degree; 4- has this trait more than the typical child;

3- compares with typical child; 2- has this trait less than the typical child;

1- lacks this trait.

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. Has advanced vocabulary, expresses himself or herself well     | 5 | 4 | 3 | 2 | 1 |
| 2. Thinks quickly   | 5 | 4 | 3 | 2 | 1 |
| 3. Recalls facts easily   | 5 | 4 | 3 | 2 | 1 |
| 4. Wants to know how things work                                  | 5 | 4 | 3 | 2 | 1 |
| 5. Is reading (before he started kindergarten)                    | 5 | 4 | 3 | 2 | 1 |
| 6. Puts unrelated ideas together in new and different ways        | 5 | 4 | 3 | 2 | 1 |
| 7. Becomes bored easily   | 5 | 4 | 3 | 2 | 1 |
| 8. Asks reasons why--questions almost everything                  | 5 | 4 | 3 | 2 | 1 |
| 9. Likes "grown-up" things and to be with older people            | 5 | 4 | 3 | 2 | 1 |
| 10. Has a great deal of curiosity                                 | 5 | 4 | 3 | 2 | 1 |
| 11. Is adventurous  | 5 | 4 | 3 | 2 | 1 |
| 12. Has a good sense of humor                                     | 5 | 4 | 3 | 2 | 1 |
| 13. Is Impulsive, acts before he thinks                           | 5 | 4 | 3 | 2 | 1 |
| 14. Tends to dominate others if given the chance                  | 5 | 4 | 3 | 2 | 1 |
| 15. Is persistent, sticks to a task                               | 5 | 4 | 3 | 2 | 1 |
| 16. Has good physical coordination and body control               | 5 | 4 | 3 | 2 | 1 |
| 17. Is independent and self sufficient in looking after himself   | 5 | 4 | 3 | 2 | 1 |
| 18. Is aware of his surroundings and what is going on around him. | 5 | 4 | 3 | 2 | 1 |

19. Has a long attention span

5 4 3 2 1

20. Wants to do things for himself early--example  
dressing and feeding himself

5 4 3 2 1

# A STUDENT LOOKS AT HIMSELF

Please show whether you agree or disagree with each of the statements by marking one of the spaces.

|   | Strongly<br>Agree | Agree | Disagree | Strongly<br>Disagree |
|---|-------------------|-------|----------|----------------------|
| 1. I am a good athlete.   |                   |       |          |                      |
| 2. I am a good student.   |                   |       |          |                      |
| 3. I am popular with other students.  |                   |       |          |                      |
| 4. I am one who understands and accepts other people.                           |                   |       |          |                      |
| 5. I am very sociable and know how to get along with other people.              |                   |       |          |                      |
| 6. Other people recognize that I am an intelligent person.                      |                   |       |          |                      |
| 7. I am warm and understanding.   |                   |       |          |                      |
| 8. I am easy to get along with.   |                   |       |          |                      |
| 9. I enjoy working with mechanical and scientific things.                       |                   |       |          |                      |
| 10. I enjoy abstract or mathematical problems.                                  |                   |       |          |                      |
| 11. I am one who likes to work independently on special projects.               |                   |       |          |                      |
| 12. I enjoy debating or discussing an idea.                                     |                   |       |          |                      |
| 13. I enjoy "losing myself" in a good book or in imagination.                   |                   |       |          |                      |
| 14. I have a good sense of humor.   |                   |       |          |                      |
| 15. My work is often quite original.  |                   |       |          |                      |
| 16. I am able to come up with a large number of ideas or solutions to problems. |                   |       |          |                      |

|   | Strongly<br>Agree | Agree | Disagree | Strongly<br>Disagree |
|---|-------------------|-------|----------|----------------------|
| 17. I am able to take charge of planning a project.   |                   |       |          |                      |
| 18. I don't mind being different from other people.   |                   |       |          |                      |
| 19. I like to study subjects that are challenging or even difficult.                                  |                   |       |          |                      |
| 20. I often use music, art, or drama to express my feelings.  |                   |       |          |                      |
| 21. I don't like to accept what someone else says without challenging it.                             |                   |       |          |                      |
| 22. I feel strongly about things and often express my feelings, even if I think others will disagree. |                   |       |          |                      |
| 23. I spend more time than I would need to on assignments because I enjoy the learning.               |                   |       |          |                      |

24. Here are six areas of talent. In which area do you see yourself as being most talented? Rank them as you see them applying to your abilities, (1) First talent area, (2) Second talent area, etc.

\_\_\_\_\_ General intellectual ability.

\_\_\_\_\_ Specific academic aptitude (in one subject area, such as science, math).

\_\_\_\_\_ Creative Thinking.

\_\_\_\_\_ Leadership Ability.

\_\_\_\_\_ Visual and performing arts.

\_\_\_\_\_ Psychomotor ability (such as mechanical skills or athletic ability).

\_\_\_\_\_, Student

Baldwin Identification Matrix\*

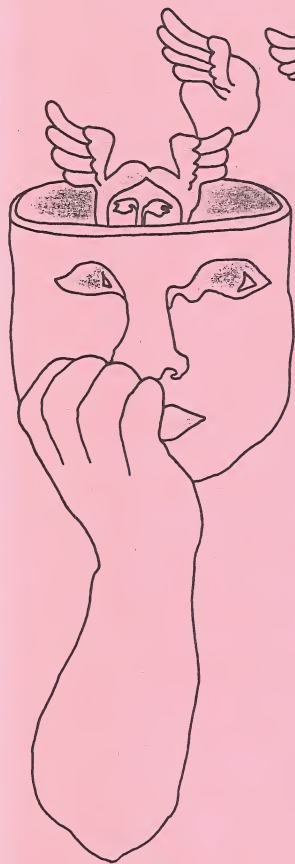
Indicate points after each test according to score earned. Add total number of points earned by student.

| <u>Tests</u>                        |     | <u>Scores</u> |           |        |         |        |
|-------------------------------------|-----|---------------|-----------|--------|---------|--------|
|                                     |     | 5             | 4         | 3      | 2       | 1      |
|                                     |     | 140+          | 130-      | 120-   | 110-    | 100-   |
|                                     |     |               | 139       | 129    | 119     | 109    |
| 1. Standardized Intelligence Tests  | ( ) | ( )           | ( )       | ( )    | ( )     | ( )    |
|                                     |     | 95%ile        | 90-       | 85-    | 80-     | 75-    |
|                                     |     |               | 94%ile    | 89%ile | 84%ile  | 79%ile |
| 2. Achievement Test Composite Score | ( ) | ( )           | ( )       | ( )    | ( )     | ( )    |
|                                     |     | 95%ile        | 90-       | 85-    | 80-     | 75-    |
|                                     |     |               | 94%ile    | 89%ile | 84%ile  | 79%ile |
| 3. Achievement Test - Reading Score | ( ) | ( )           | ( )       | ( )    | ( )     | ( )    |
|                                     |     | 95%ile        | 90-       | 85-    | 80-     | 75-    |
|                                     |     |               | 94%ile    | 89%ile | 84%ile  | 79%ile |
| 4. Achievement Test - Math Score    | ( ) | ( )           | ( )       | ( )    | ( )     | ( )    |
|                                     |     | 32            | 28-31     | 24-27  | 20-23   | 0-19   |
| 5. Learning Scale Score             | ( ) | ( )           | ( )       | ( )    | ( )     | ( )    |
|                                     |     | 36            | 32-35     | 28-31  | 24-27   | 0-23   |
| 6. Motivational Scale Score         | ( ) | ( )           | ( )       | ( )    | ( )     | ( )    |
|                                     |     | 40            | 36-39     | 32-35  | 28-31   | 0-27   |
| 7. Creativity Scale Score           | ( ) | ( )           | ( )       | ( )    | ( )     | ( )    |
|                                     |     | 40            | 36-39     | 32-35  | 28-31   | 0-27   |
| 8. Leadership Scale Score           | ( ) | ( )           | ( )       | ( )    | ( )     | ( )    |
|                                     |     | Superior      | Very Good | Good   | Average | Below  |
| 9. Various Teacher Recommendations  | ( ) | ( )           | ( )       | ( )    | ( )     | ( )    |
| 10.                                 | ( ) | ( )           | ( )       | ( )    | ( )     | ( )    |
| 11.                                 | ( ) | ( )           | ( )       | ( )    | ( )     | ( )    |

Total number of points \_\_\_\_\_

\*Recommended by Dr. Alexinia Baldwin, University of New York at Albany.





# program design



# Wanted: A Program for the Gifted and Talented That Meets Individual District Needs

Most visitors to the Kennedy Space Center in Cape Canaveral, Florida, are awed. Thoughtful inspection convinces one that the nation that controls technology controls the world. This applies not only to space technology but also to genetic engineering, computer science, robotics, undersea exploration and the myriad of other pursuits currently engaging adventurous souls. World influence and national prestige also emanate from individual citizens' achievements in economics, art, music, theater and, indeed, all areas of human endeavor. But who are the creative, intelligent and talented people who produce such achievements? In his report to Congress in 1972, then-commissioner of education Sidney P. Marland, Jr., described them as follows:

Gifted and talented children are those identified by professionally qualified persons [and] who by virtue of outstanding abilities are capable of high performance. These are children who require differentiated educational programs and services beyond those normally provided by the regular school program in order to realize their contribution to self and society.

Despite the demonstrated need to nurture society's most talented members, however, our gifted and talented students have not fared well. The egalitarian spirit, long pervasive in this country, has caused us to look askance at those who are intellectually superior or have other outstanding talents. Psychologists have often noted that talent must be discovered early and continuously nourished if it is to flourish. Yet the notion persists that the gifted and talented can fend for themselves. Indeed, the idea that all men are created equal causes teachers to teach as if each of her students is equal to the one beside him or her. Is it any wonder that superior students become bored and apathetic?

Benjamin S. Bloom and Lauren A. Sosniak indicate, in their study of talented adults, that schools seldom encourage the development of their unique talent but either ignore or have a decidedly negative influence on the development of that talent. (See their article, "Talent Development vs. Schooling," *Educational Leadership*, November, 1981.) "For these individuals the conflicting requirements of talent development and schooling could rarely be resolved. Schooling was truly something to be suffered through." The authors sum up their findings by sadly noting that, "We report very few instances in which talent development and schooling function to enhance each other."

Becoming aware of the problem and accepting responsibility for it are the first steps toward resolution. Indeed, we have done a fine job of research into the causes of social, psychological and economic ills. It's the solutions that often go awry — the later steps where we falter. Such has been the case regarding the establishment of programs for the gifted. To begin with, their numbers pose a problem. Nationally, they only amount to between three and five per cent of the population. To meet their needs, districts have to reallocate scarce resources. And all districts are not created equal: some house all grades in one building; others serve large cities; there are rural, suburban and inner city districts. Also, the size and nature of the student population vary considerably. E.g., a relatively small district may draw from a professional and scientific community and therefore contain a high per cent of gifted and talented people, whereas an inner city school may have a large number of students with learning problems and comparatively few gifted and talented students who must be provided for.

The first order of business, then, is to make a scholastic assessment of the school or district to identify how many students are gifted and talented and the variety of talents they demonstrate. Given this profile of the student body, you can begin to tailor a program to meet the needs of the district and its students.

Dr. Marland's previously-mentioned definition of the gifted paints them in broad strokes, stating as he does that they have "outstanding abilities" and are "capable of high performance." Your district must carefully define those terms as they apply to your particular student body. Does "outstanding ability" mean an I. Q. of 120 or 130? Does it apply only to general intellectual ability as measured by the intelligence test or — because few students will demonstrate equal talents in all academic areas — should you differentiate among verbal ability, mathematical ability, logical reasoning, spatial visualization, creativity, etc.? What criteria should you use to define and evaluate high performance in fields such as art, music and dance? Should you adopt different programs for the gifted and talented elementary and secondary students? What provisions should be made for gifted and talented underachievers? No man can wear another's clothes! These and many other questions must be answered by each school and district as it addresses the problem of developing programs for the gifted and talented.

## Identifying the gifted and setting appropriate program goals

Identification of the gifted begins with a carefully worked-out definition, and the successful operation of identification depends on the procedure adopted. One model that has gained wide acceptance is that developed by Renzulli. As the diagram illustrates, this model includes not only intelligence but also creativity and those elements (interest, drive and maturity) that lead to task commitment. Renzulli's model can be applied to the dancer, the athlete and the artist as well as to the scientist and the creative writer.

Our philosophy of life, with its attendant values, guides us much as the stars guided the ancient mariners. Once we have recognized the need to help gifted and talented youngsters develop their talents, we must spell out the program's objectives. The following list is not all-inclusive, but can help guide your district as it examines its values and resources, seeking to provide a

program that will best meet individual and social needs. Consider these, among the goals of a program for the gifted:

1. Gifted and talented students will be identified early in their educational careers.
2. They will be taught to accept themselves and their strengths and weaknesses.
3. They will be exposed to a rich and diverse curriculum. Imaginative use will be made of the school's and community's resources.
4. The gifted and talented will be encouraged to excel.
5. They will accept the social responsibility to use their gifts for useful purposes.
6. An ethical view of life and compassion towards others will be stressed.

Schools and districts reflect the communities they serve. Hence, their student bodies will differ. This point must be stressed because it is the reason why districts must develop unique programs for their gifted and talented. After defining the gifted and talented in a general sense, develop more refined profiles of these students including, where appropriate, I. Q., past performance, scores on aptitude tests, tests for creativity, achievement tests, teacher evaluation, autobiographies and outside experts. Obviously, the I. Q. may carry greater weight regarding academic subjects than in the fields of music and art. Student-written reports of their lives may reveal latent interests and drives that can fill in a picture and aid final evaluations. With the advice of counselors and outside experts, these multi-faceted profiles can contribute to the selection of gifted under-achievers.

Past performance has proven to be the best single predictor of future success, especially regarding the performing arts. The following criteria, used to identify the gifted and talented, are listed in the order of their effectiveness:

1. past performance,
2. individual intelligence tests,
3. group intelligence tests,
4. achievement tests,
5. interest and aptitude examinations,
6. autobiographies and
7. advice from counselors and other in-

terested parties.

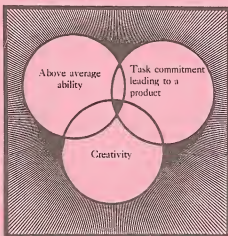
But remember — what works best is the *multiple* identification system. Past performance coupled with I. Q., teacher evaluation and input from one or more of the other sources will lead to greater objectivity and thoroughness.

#### Acceleration and enrichment: basic problem elements

Historically, programs for the gifted and the talented have provided acceleration and enrichment.

Acceleration may take any of these forms:

1. skipping of grades,
2. early admission to high school or college and
3. more rapid progress in school through ungraded programs, completing two grades in one, credit by examination and advanced placement courses.



Because many superior students will go on to graduate school, it seems foolish to make them wait until they are 26 or 28 before they can earn a living. Nevertheless, despite research showing that permitting superior students to graduate from high school at 16 or 17 is not harmful, acceleration is not widely used. Lynn H. Fox ("Program for the Gifted and Talented, an Overview", *The 78th Yearbook of the National Society for the Study of Education*, University of Chicago Press, 1979) believes that resistance to acceleration is based on the erroneous notion that students who skip a

year or two will miss some important learning or suffer social maladjustment. Yet, few seem concerned with the intellectual damage done to students whose abilities go unchallenged. Milton J. Gold, in *Elementary and Secondary Level Programs for the Gifted and Talented* (Columbia University, 1980), points out that a child of 10 with an I. Q. of 130 performs intellectually as an average 13-year-old might, and that a 16-year-old with a similar I. Q. functions as a 21-year-old might. Fox, who supports acceleration, notes that, "Few gifted children need six years to master the basics of reading, writing, and arithmetic as taught in the typical elementary school." All districts, large and small, can use acceleration to help the gifted and talented. Early diagnosis, combined with guidance on an individual basis, can make education more challenging and rewarding for these students.

Enrichment is the current mode for dealing with the gifted. Because acceleration (except when dealing with highly unusual individuals) simply moves pupils ahead one or two years, enrichment must be the core of a gifted program. Enrichment may be lateral or deepening, and can take any of these forms:

1. classroom enrichment,
2. specialized schools,
3. special (honors) classes,
4. special courses,
5. seminars,
6. use of community resources and
7. independent study and research.

Each of these has a place in a gifted program. Classroom enrichment depends on individualized instruction — theoretically and practically this is sound pedagogy. Unfortunately, teachers teach "to the middle", neglecting the slow and the bright. It is this very condition that has led to the demand for special provision for the gifted and talented.

Community resources have long been a neglected area in education. It's time to break down the walls that separate education from the community and hence life itself. This is particularly crucial regarding the gifted, because schools simply do not have the capacity to meet their gifted stu-

# Every district committed to an effective gifted program must coordinate community resources and quality, in-depth programs. Teaching must emphasize reasoning, abstract thinking and creative problem-solving.

dents' intellectual needs.

Among potential community resources are:

1. nearby colleges and universities,
2. museums,
3. local industries,
4. county-wide elementary and secondary educational facilities,
5. the talents of the faculty, parents, retired people and
6. writers, dancers, athletes, etc., who live in the community.

Large districts can provide enrichment more easily because they will have a better number of gifted students. For example, special classes are feasible in music, art or academic subjects where the population can sustain them. In contrast, smaller schools may have to join forces in countywide efforts. Failing this, perhaps the small school could assign one teacher to develop special activities for gifted pupils. These are just a few possible enrichment activities gifted and talented students could engage in (the only limit is your imagination):

1. independent research and experiments,
2. community work with public officials, lawyers, the local hospital, radio or television station,
3. local college courses,
4. Saturday or summer workshops in dance, mathematics or creative writing and
5. special competitions in art, creative writing, debate or music.

Through these activities, gifted and talented students can gain recognition, encouragement and guidance toward developing their special abilities.

**A word about the people who run the gifted programs — and the programs themselves**

When something is everybody's business, it's nobody's business. Innovative efforts can fail if administrators do not select someone who *wants* to be responsible.

for a program. Delegation of authority and accountability can demonstrate that the district is serious about its commitment to the gifted and talented. Therefore, on either a schoolwide or districtwide basis, some individual must be responsible for administering the program for the gifted and talented.

Though enrichment programs will vary depending on the size of the district, the nature of the student body the district serves and community resources available, all programs must come up to specific standards. The gifted and talented deserve quality programs. Just more is not better: studies must be in-depth; teaching must emphasize reasoning, abstract thinking and creative problem solving. Most gifted students are inner-directed, independent learners who prefer independent study and discussion. Not every teacher is capable of teaching the gifted (and make no mistake — students quickly take the measure of the teacher!). A teacher of the gifted and talented must possess a secure command of his or her subject, be intellectually alert and willing to learn from students. Teachers who are secure in themselves are not threatened by pupils who may sometimes know more than they themselves. These teachers see themselves as guides rather than gurus and are willing to permit the gifted and talented to experiment and engage in productive pursuits under guidance.

Schools exist to serve both individuals and the society we live in. We can more effectively serve both by making the commitment to provide for the gifted and talented. It begins by assessing the student body and community resources — and continues with adopting an individualized program and selecting a coordinator to administer it and teachers to implement it. An effective program for the gifted and talented cannot be copied, but must be carefully developed for those individuals who will be working under it. ■

## EDUCATIONAL SOFTWARE

### ADMINISTRATIVE

- **REGISTRAR** \$600  
High School registration for 1600 students and up to 90 teachers. Up to 7 courses per student. Conflict matrix. Load balancing. Rolls. Scantron card reader version available. Call for customized Corvus version.
- **TRANSCRIPT** \$300  
Grade reporting system for up to 2000 students. Prints grade labels for report cards and permanent records. Scantron version available, too.
- **SAM** \$100  
Student Advisory Management. Records grades and computes term averages and cumulative averages for 1600 students. Prints ranked lists of students according to cumulative averages. Links to TRANSCRIPT above to avoid duplicate data entry.
- **ADA** \$500  
Attendance Date Analyst. Centralized daily home room attendance records for up to 1600 students. Records for nine 20-day months. Daily absentee list, alphabetized for each grade level. Monitors excuses, tardies, withdrawals, transfers and more. School summary report for current month and year-to-date, home room summary reports. EASY TO USE! Relieves teacher from attendance record keeping.

## SOUTHEASTERN EDUCATIONAL SOFTWARE

3300 Buckeye Rd.

Suite 663

Atlanta, Georgia 30341

(404) 457-8336



# GIFTED AND TALENTED PROGRAM DESIGN - STRUCTURE FOR DISTRICT INPUT

## I PROGRAM PLAN



- A. Background Reading
- B. Needs Assessment
- C. Definition of Gifted & Talented Area
- D. Types of Gifted/Talented Program
- E. Types of Identification Instruments
- F. Types of Student Groupings
- G. Curriculum Options--Differentiated
- H. Program Considerations

## II PROGRAM ORGANIZATION



- A. Philosophy
- B. Goals
- C. Objectives
- D. Identification Procedures (Inclusion of Selection criteria)
- E. Curriculum Design
- F. Program Implementation
  - 1. How did you assess individual learning styles, interests, strengths and weaknesses?
  - 2. How do you assess individual needs of staff (i.e. surveys, observation, etc.)?
  - 3. How do you determine appropriate activities to be used with gifted and talented students?
  - 4. Where do you get appropriate instructional materials?
  - 5. What community resources have you utilized? community, district, student, school.
  - 6. In what ways is your curriculum differentiated from the regular education program at grade level?
  - 7. How does your gifted and talented curriculum integrate with your district's educational program?
  - 8. How/where do you train your staff?
  - 9. How are parents involved in your program?

## III PROGRAM EVALUATION

- A. Objective Methods
- B. Subjective Methods  
Student, Teacher, Parent, Administration
- C. Recycle--Long-Range Planning  
--Short-Range Planning



## IV RESOURCES

developed by committee to design management manuals for the Office of Public Instruction, Gifted and Talented Programs.

G. Program Management



# Needs Assessment Survey To Assist In The Development Of A Gifted Student Education Program

### 1. Area of Giftedness-General Intellectual Abilities

Students who are bright in their thinking, problem solving and decision making through the use of higher mental processes shown by performance on tests or observed behavior.

| Students who are bright in their thinking, problem solving and decision making through the use of higher mental processes shown by performance on tests or observed behavior. | Not Being Done | Rarely Being Done | Usually being done but need more | Adequately being done; leave as is; |
|---|----------------|-------------------|----------------------------------|-------------------------------------|
| 1. Are tests given for measuring intellectual abilities of students at your school?<br>a. What test?<br>b. At what grade level?   |                |                   |                                  |                                     |
| 2. Are test scores used in selecting students for enrichment activities in your class?  |                |                   |                                  |                                     |
| 3. Are students identified as intellectually bright accelerated in grade levels? subject level?   |                |                   |                                  |                                     |
| 4. Are students suspected of giftedness according to group test scores recommended for individual testing to verify their intellectual potential?                             |                |                   |                                  |                                     |
| 5. Are special school activities available to those who consistently excel in intellectual abilities?   |                |                   |                                  |                                     |
| 6. Do others (specialists, peers, parents, mentors) from outside school come to school to work specifically with the bright students?   |                |                   |                                  |                                     |
| 7. Are intellectually bright students allowed to leave the class for activities designed for them?<br>a. Are they in or away from your building?                              |                |                   |                                  |                                     |

## II. Area 2 - Specific Academic Abilities

Students who possess outstanding knowledge about a specific subject. (e.g. math superiority)

1. Are students observed capable of working about grade level individualized within your class and allowed to go beyond the average in a subject area?
2. Does your school provide special options for those able to perform academically above grade level? What options?  
honors classes  
field trips  
advanced placement  
mentors  
research activities  
individual projects

| Not Being Done | Rarely Being Done | Usually being done but need more | Adequately being done; leave as is |
|----------------|-------------------|----------------------------------|------------------------------------|
|                |                   |                                  |                                    |
|                |                   |                                  |                                    |

## III. Area 3 - Leadership Abilities

Students who set patterns of behavior for others or assume leadership. Those who get others to do as they would like them to do.

1. Are there means for measuring leadership abilities of students in your class?  
If so how are they measured?  
by performance  
leadership sociometrics  
scales  
checklists  
anecdotal records  
teacher observations
2. Are those identified as leaders given opportunities to assume leadership roles in your class?  
How?

| Not Being Done | Rarely Being Done | Usually being done but need more | Adequately being done; leave as is |
|----------------|-------------------|----------------------------------|------------------------------------|
|                |                   |                                  |                                    |
|                |                   |                                  |                                    |

#### IV. Area 4 - Creative Thinking Abilities

Students who engage in divergent processes of fluent, flexible, original, and elaborative thinking, coming up with creative productions as a result of such processes.

1. Are there means provided for measuring creative thinking in your class? If so, how?  
creativity tests  
observations  
creativity checklists  
demonstrated performance
2. Are students who excel in creative thinking encouraged to bring and work on hobbies, collections, imaginative ideas, and/or inventions?
3. Do you provide lessons which require creative thinking?
4. Do you have special activity centers set up where students can work on creative ideas?

| Not Being Done | Rarely Being Done | Usually being done but need more | Adequately being done; leave as is |
|----------------|-------------------|----------------------------------|------------------------------------|
|                |                   |                                  |                                    |
|                |                   |                                  |                                    |
|                |                   |                                  |                                    |
|                |                   |                                  |                                    |

#### V. Area 5 - Visual and Performing Arts Abilities and Talents

Students who possess exceptional talents or show strong potential in graphic arts, sculpture, music, dance, mime, or drama.

1. Are gifted students identified?  
How?

| Not Being Done | Rarely Being Done | Usually being done but need more | Adequately being done; leave as is |
|----------------|-------------------|----------------------------------|------------------------------------|
|                |                   |                                  |                                    |

2. Are students gifted in the arts selected and actively involved in displaying, beautifying, decorating, or performing artistic activities?  
If so, how?  
in classroom  
concerts  
contests  
plays  
exhibits  
programs  
fairs  
others
3. Do others from school or outside resource people come in to work with those with talent?
4. Are artistically talented students given time to develop those talents?

| Not Being Done | Rarely Being Done | Usually being done but need more | Adequately being done; leave as is |
|----------------|-------------------|----------------------------------|------------------------------------|
|                |                   |                                  |                                    |
|                |                   |                                  |                                    |
|                |                   |                                  |                                    |

#### Area 6 - Psychomotor Abilities and Talents

Students who possess good basic perceptual motor abilities and physical fitness development or show strong potential for such development.

1. Are there means provided for measuring physical-sensory motor development?
2. Are students suspected of being physically and perceptually advanced selected for activities requiring fine and gross motor development?
3. Are programs and/or activities available that encourage development and/or recognition of psychomotor abilities? What activities are there? (e.g. jumprope contest)

| Not Being Done | Rarely Being Done | Usually being done but need more | Adequately being done; leave as is |
|----------------|-------------------|----------------------------------|------------------------------------|
|                |                   |                                  |                                    |
|                |                   |                                  |                                    |
|                |                   |                                  |                                    |

# AREAS FOR CONSIDERATION IN PLANNING A GIFTED PROGRAM

## ACTIVITIES

|  | Most<br>Important<br>5 | 4 | 3 | Least<br>Important<br>2 | 1 | Timeline | Who Will<br>Be Responsible |
|--|------------------------|---|---|-------------------------|---|----------|----------------------------|
| 1. Decide on curricular areas in which the program will focus.                     |                        |   |   |                         |   |          |                            |
| 2. Develop an identification system.   |                        |   |   |                         |   |          |                            |
| 3. Review literature on programs for gifted.                                       |                        |   |   |                         |   |          |                            |
| 4. Survey the community for agencies and facilities that might serve as resources. |                        |   |   |                         |   |          |                            |
| 5. Prepare a proposal budget.  |                        |   |   |                         |   |          |                            |
| 6. Develop job specifications for program coordinator.                             |                        |   |   |                         |   |          |                            |
| 7. Select a program coordinator.   |                        |   |   |                         |   |          |                            |
| 8. Decide on which grade levels will be involved in the program.                   |                        |   |   |                         |   |          |                            |
| 9. Formulate a statement of the philosophy of your program.                        |                        |   |   |                         |   |          |                            |

|  | Most<br>Important<br>5 | 4 | 3 | Least<br>Important<br>2 | 1 | Timeline | Who Will<br>Be Responsible |
|--|------------------------|---|---|-------------------------|---|----------|----------------------------|
| 10. Survey the extent and variety of gifted students in our district.  |                        |   |   |                         |   |          |                            |
| 11. Develop a system for reporting to parents.   |                        |   |   |                         |   |          |                            |
| 12. Review literature on identification instruments.   |                        |   |   |                         |   |          |                            |
| 13. Decide on how many students the program will serve.  |                        |   |   |                         |   |          |                            |
| 14. Survey the community for potential resource persons.   |                        |   |   |                         |   |          |                            |
| 15. Develop a plan for program evaluation.   |                        |   |   |                         |   |          |                            |
| 16. Review literature on characteristics of gifted.  |                        |   |   |                         |   |          |                            |
| 17. Decide on type of program model which will best serve our district (independent research program, team-teaching, etc.) |                        |   |   |                         |   |          |                            |
| 18. Obtain space in one or more buildings.   |                        |   |   |                         |   |          |                            |
| 19. Survey the facility for potential resource persons.  |                        |   |   |                         |   |          |                            |
| 20. Develop awareness of need for a program on the part of the faculty   |                        |   |   |                         |   |          |                            |

|  | Most Important |   |   |   |   | Timeline | Who Will Be Responsible |
|--|----------------|---|---|---|---|----------|-------------------------|
|  | 5              | 4 | 3 | 2 | 1 |          |                         |
| 21. Establish general goals and objectives.  |                |   |   |   |   |          |                         |
| 22. Establish a planning committee.  |                |   |   |   |   |          |                         |
| 23. Review and select curricular materials.  |                |   |   |   |   |          |                         |
| 24. Obtain the services of a general consultant.   |                |   |   |   |   |          |                         |
| 25. Visit other programs.  |                |   |   |   |   |          |                         |
| 26. Decide on how much time students will spend in the program.  |                |   |   |   |   |          |                         |
| 27. Develop in-service opportunities which will provide information and resources in in-depth stages for building personnel.   |                |   |   |   |   |          |                         |
| 28. Devise means for communicating information about the gifted program to teaching staff, parents, community (newsletters, PTA meetings, bi-monthly meeting, etc.). |                |   |   |   |   |          |                         |
| 29. Develop effective means for evaluating and revising curriculum and general program development.  |                |   |   |   |   |          |                         |



## PROGRAM PROTOTYPES

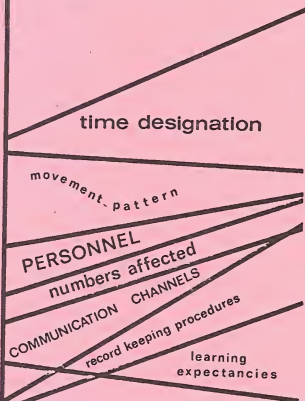
Program prototypes are organizational patterns which become the setting for the learning environment that accommodates the needs of the gifted and talented. The adoption and subsequent development of any organizational pattern is not the ending point. Rather, it is the starting point for providing learning opportunities appropriate for these students.

The decision to utilize one prototype over another is based on a careful examination of the degree to which each fits into the institution and matches the objectives developed for the program. The real question is not which prototype to select but how the selection of any affects the students.

A special program for the gifted and talented usually focuses on the use of several prototypes. The literature must be used as a model for identifying and recognizing the potential of these program prototypes. Putting any of these into practice revolves around its workability in a particular situation.

No one prototype will do everything. Each prototype should be reviewed in relationship to how it can be molded and varied to the advantage of the students and the total program. A program can be a composite of several prototypes which combine and adapt what is possible with what is practical and feasible.

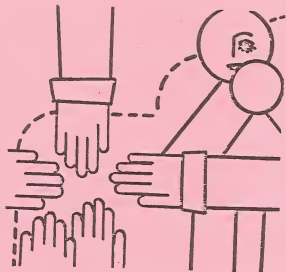
### COMPONENTS OF ANY PROTOTYPE



Extracted from: PROVIDING PROGRAMS FOR THE GIFTED AND TALENTED,  
Sandra Kaplan, Leadership Training Institute,  
Los Angeles, Calif., 1974

## ELEMENTS AND KINDS OF PROTOTYPES

There are many classifications of prototypes applicable to a program for the gifted and talented. The basis for developing any program prototype is found in using some form of enrichment, grouping, acceleration, and guidance. Each alternative can become an element to be employed within the design of a prototype, or it can become a separate kind of program prototype. The degree to which each element is developed ultimately determines the kind of prototype. Thus, the variations between prototypes are a result of how these components are put together and how and when they are made available to students. A prototype may be identified by the predominant use of one element over another. It is less a matter of definition than it is a matter of recognizing the elements which direct the building of a prototype to accommodate the needs of gifted and talented students.



| ENRICHMENT   |   |  |
|--|---|--|
| ENRICHMENT is. . . experiences which replace, supplement, or extend learnings as the basis for each type of prototype. Enrichment is the reason for the development or adoption of any prototype.  |   |  |
| GROUPING   | ACCELERATION  | GUIDANCE   |
| Provisions which facilitate the student's access to learning opportunities   | Activities which promote learning beyond regularly prescribed curriculum  | Experiences which promote understanding of the self and others and explore opportunities for careers   |
| <ul style="list-style-type: none"> <li>--Cluster grouping within the regular class</li> <li>--Special regular classes</li> <li>--Part-time groups before, during, after school or Saturdays</li> <li>--Seminars</li> <li>--Minicourses</li> <li>--Team teaching</li> <li>--Alternative schools</li> <li>--Resource room or demonstration classroom</li> <li>--Itinerant or resource teacher</li> <li>--Field trip and cultural events</li> <li>--Special summer</li> </ul> | <ul style="list-style-type: none"> <li>--Early entrance or preschool classes</li> <li>--Double grade promotion</li> <li>--Advanced placement classes</li> <li>--Ungraded classes</li> <li>--Multi-age classes</li> <li>--Tutoring</li> <li>--Correspondence courses</li> <li>--Extra classes for extra credit</li> <li>--Credit by examination</li> <li>--Independent study</li> <li>--Continuous progress curriculum</li> <li>--Year-round school</li> <li>--Flexible scheduling</li> <li>--Block or back to back classes</li> </ul> | <ul style="list-style-type: none"> <li>--Individual conferences</li> <li>--Group meetings</li> <li>--Career and vocational counseling</li> <li>--Educational counseling</li> <li>--Community programs and sponsorship</li> <li>--Scholarship societies</li> <li>--Study groups</li> <li>--Special education classes</li> <li>--Tutoring</li> </ul> |

The following pages provide a more comprehensive description of these program prototypes.

# Outline of Prototypes

## intra-classroom prototypes

### OUTLINE OF PROTOTYPES

#### Intra-Classroom Prototypes

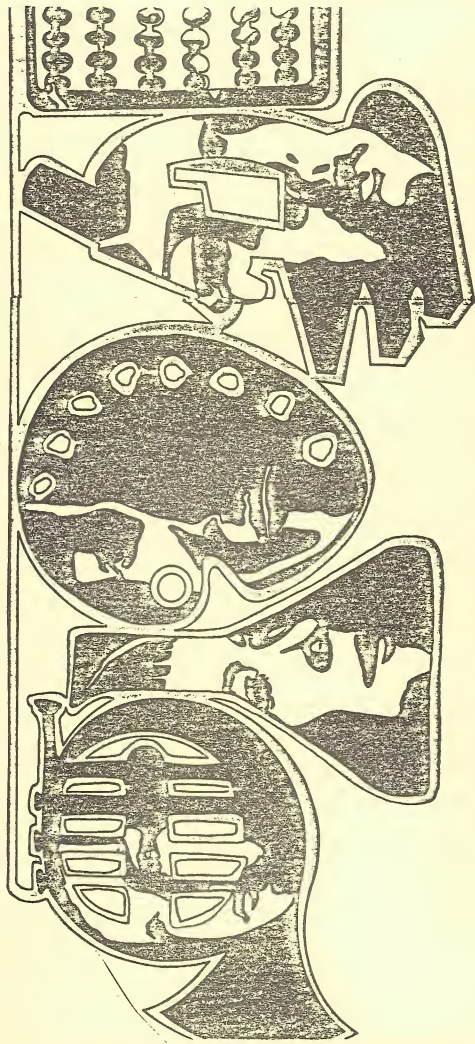
- independent study
- tutoring
- correspondence
- cluster grouping
- special regular classes
- ungraded classrooms
- supplemental activities

#### Extra-Classroom Prototypes

- special interest groups before, during,  
after school
- seminars
- community mentors and resources
- advanced placement for part of the  
school day
- counseling
- tutoring
- correspondence
- teaming
- resource centers
- independent study
- off-campus enrollment

## extra-classroom prototypes





# CURRICULUM DEVELOPMENT

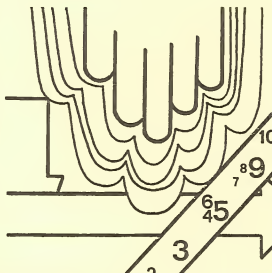
VI



# DIFFERENTIATING CURRICULUM FOR THE GIFTED AND TALENTED

Curriculum for the gifted and talented can only be marked as such if it encompasses elements which distinguish it from being suitable for the education of all children. Curriculum for gifted students must be congruent with the characteristics that identify them as a distinct population. The answer to the question of why a student is gifted or talented is also the answer to the question of what type of curricular provisions should be developed for this child.

Differentiation of curricular activities for the gifted and talented relies on the elaboration of certain variables: procedures for presenting learning opportunities, nature of the input, and expectancies for learning outcomes.



## DIFFERENTIATING LEARNING WITHIN THE REGULAR CURRICULUM

|  |   |
|--|---|
| Procedures for Presenting Learning Opportunities | Exposure - Students are exposed to experiences, materials, and information which are outside the bounds of the regular curriculum, do not match age/grade expectancies, and introduce something new or unusual.   |
|  | Extension - Students are afforded opportunities to elaborate on the regular curriculum through additional allocation of working time, materials, and experiences, and/or further self-initiated or related study. |
|  | Development - Students are provided with instruction which focuses on thorough or new explanation of a concept or a skill which is part of a general learning activity within the regular curriculum.             |

## DIFFERENTIATING LEARNING AS A SEPARATE CURRICULUM

|                             |  |
|-----------------------------|--|
| Type of Input               | Accelerated or advanced content                          |
|                             | Higher degree of complexity of content                   |
|                             | Introduction of content beyond the prescribed curriculum |
|                             | Student-selected content according to interest           |
|                             | Working with the abstract concepts in a content area     |
|                             | Level of resources used                                  |
| Type of resources available |  |
|                             |  |

|                           |   |
|---------------------------|---|
| Expectancies for Learning | Appropriating a longer time for learning  |
|                           | Creating or generating something new (information, ideas, product)                  |
|                           | Depth of learning   |
|                           | Transfer and application of learning to other and/or new areas of greater challenge |
|                           | Evidence of personal growth or sophistication in attitudes, appreciations, feelings |
|                           | Formulating new generalizations   |
|                           | Development of higher level cognitive processes                                     |
|                           | Stylizing and implementing own study design   |

Extracted from: PROVIDING PROGRAMS FOR THE GIFTED AND TALENTED.  
Sandra Kaplan, National Leadership Institute,  
Los Angeles, Calif., 1974



# DIFFERENTIATING CURRICULAR ACTIVITIES FOR THE GIFTED AND TALENTED

| MEANS OF DIFFERENTIATING                                    | EXPLANATION  | ILLUSTRATION  |
|---|--|---|
| 1. Accelerated or advanced content                          | Working with knowledge and skills which correlate with the student's mental rather than chronological age, parallel his interests, and satisfy his need and quest for substantive information  | Student ready for algebra at nine-year-old level is given a tutor.  |
| 2. Higher degree of complexity of content                   | <p>Allowing student performance to dictate speed/direction of learning</p> <p>Learning experiences which require higher order thinking processes, such as analyzing, creating, and evaluating</p> <p>Learning experiences that require assimilation of principles, theories, and concepts associated with knowledge held by "the professional or expert"</p> | The gifted student is pursuing the topic of Occults as an outgrowth of learning the expected topic of Mythology.  |
| 3. Introduction of content beyond the prescribed curriculum | <p>Learning what is traditionally reserved for another grade or age level</p> <p>Learning what is related to other areas or crosses the boundaries of the disciplines</p>  | Gifted student is studying the cause-and-effect relationships of various forms of paternalism in people's voting pattern in different countries as an independent study within a United States history class. |
| 4. Student-selected content according to interest           | Allowing student need and interest to govern what is to be learned and/or to dictate what areas within a body of knowledge that will be studied  | The gifted student interested in violin is independently pursuing the topic in a general music class by leaving his regular class in the elementary school to attend class at the high school.                |
| 5. Working with the abstract concepts in a content area     | Dealing with those ideas, theories, and concepts which are inferred or discrete and which require reflective, critical, and creative thinking in order to make them concrete or give them meaning  | The gifted student illustrates the ways a proverb is "lived" by a literary character.   |
| 6. Level of resources                                       | Allowing students to use resources beyond those reserved or designated for regular curriculum input  | Gifted elementary student calls a college professor to obtain information regarding his questions in a particular subject.  |
| 7. Type of resources available                              | Insisting on acquiring information from multiple and varied resources which includes other informational sources besides books   | The gifted student was given the yellow page telephone directory to find out who could be contacted to assist him in obtaining information regarding his study.   |

| MEANS OF<br>DIFFERENTIATING   | EXPLANATION  | ILLUSTRATION  |
|---|--|---|
| 8. Appropriating a longer time for learning   | Acknowledging that the student with multi-interests and abilities needs appropriate time to learn by defining his work schedule; recognizing that the student sometimes needs to pursue a topic or skill more extensively or to a greater degree of proficiency  | The gifted student contracts with the teacher as a means of setting time limits on studying a topic. The gifted student is given additional time to experiment with properties in chemistry in order to discover or prove something in which he is interested in a more complex manner than is assigned to the other students in the class. |
| 9. Creating or generating something new   | Expressing additional examples, new and original alternatives and relationships, and possible solutions in either verbal or illustrative form to given issues, problems, and ideas   | The gifted student, as a result of a study of current political issues, is developing a new method to raise campaign funds for political office which is to be submitted to a Congressman for reaction.   |
| 10. Depth of learning providing alternative and related experience with recognition that the student requires fewer stages and less time to learn a concept | Gathering information to a level of understanding which satisfies the attainment of a skill or idea, the quest for learning exhibited by the student and the objectives of the instructor  | The gifted student is engaged in collecting and processing data which could clarify the meaning of loneliness as it applies to ethnic groups within American society.   |
| 11. Transfer and application of learning to other and/or new areas of greater challenge   | Applying what is learned to substantiate, negate, extend, or verify learnings in another area of the curriculum or another body of knowledge   | The gifted student in a math study is utilizing the process of multiplication to develop statistical predictions of how the country's food supply will accommodate the population explosion.  |
| 12. Evidence of personal growth or sophistication in attitude, appreciations, feelings  | Cultivating and rewarding honest opinions and reactions, divergent responses, and questioning attitudes; incorporating learning about humaneness as a concomitant to learning a body of knowledge of a specific skill; learning how to assess and obtain feedback about "in" personal and academic endeavors | The gifted student is making a profile of famous men who were scholars in order to identify the traits he has in common with them.  |

| MEANS OF<br>DIFFERENTIATING                           | EXPLANATION   | ILLUSTRATION  |
|---|---|---|
| 13. Formulating new generalizations                   | Summarizing and developing new theories and ideas for what has been learned and which may be used at some other time.   | The gifted student has summarized all the data relative to World War I and II to formulate a new theory about a society's need for dominance. |
| 14. Development of higher-level cognitive processes   | Learning and practicing the skills related to the processes of analyzing, synthesizing, and evaluating as both separate processes and as processes which are part of the strategies of problem solving, critical thinking, and creativity | The gifted student has evaluated the need for learning about geology and presented his argument to the Board of Education.                    |
| 15. Stylizing and implementing a student study design | Recognizing and utilizing the skills of research and scientific exploration effectively in a given learning endeavor and finding out what style of learning is successful for the student   | The gifted student has organized an outline for developing a position paper on some aspect of the use of atoms.                               |



## A Chart of Essential Curriculum

## Components for Gifted Students

| Grades K – 3   | Grades 4 – 6  | Grades 7 – 8  | Grades 9 – 12   |
|--|---|---|---|
| <p>I. Acceleration of content in reading and math at and above mastery level</p> <p>II. Enrichment through:</p> <ul style="list-style-type: none"> <li>– Problem-solving strategies</li> <li>– Science experimentation</li> <li>– Fun with computers</li> <li>– Expository and creative writing</li> <li>– Creative dramatics</li> <li>– Introduction of foreign languages (Latin, French, Spanish)</li> <li>– Development of critical and creative thinking skills</li> <li>– Learning of basic research on topics of interest</li> <li>– Interrelated arts (music, art, poetry)</li> </ul> <p>III. A counseling program for parents and students on coping with giftedness</p> <p>IV. Special instruction on:</p> <ul style="list-style-type: none"> <li>– Strategy games such as Chess</li> <li>– Individual sports</li> <li>– Interpretative reading</li> </ul> <p>V. Special projects with an assigned mentor</p> | <p>I. Acceleration of all content areas at and above mastery level (reading, math, science, social studies, language arts, art, music)</p> <p>II. Enrichment through:</p> <ul style="list-style-type: none"> <li>– A computer literacy program</li> <li>– Foreign language instruction (Latin I)</li> <li>– Research projects</li> <li>– Theater arts</li> <li>– Junior Great Books</li> <li>– Man A Course of Study (MACOS)</li> <li>– Art and music appreciation</li> <li>– Philosophy</li> <li>– Logic</li> </ul> <p>III. A counseling program for students and parents on:</p> <ul style="list-style-type: none"> <li>– Decision-making skills</li> <li>– Future course-taking and programs</li> <li>– Diagnosis and prescription of student needs</li> </ul> <p>IV. Interest clubs</p> <ul style="list-style-type: none"> <li>– Chess</li> <li>– Creative problem-solving</li> <li>– Sports</li> <li>– Reading</li> <li>– Writing</li> <li>– Science</li> </ul> <p>V. Special projects with an assigned mentor</p> | <p>I. Acceleration of content at and above mastery level in all basic content areas</p> <p>II. Enrichment through:</p> <ul style="list-style-type: none"> <li>– Foreign language instruction (Latin II)</li> <li>– A course in logic</li> <li>– Selective reading and discussion groups</li> <li>– Humanities course</li> <li>– Writing computer programs</li> <li>– Advanced research projects</li> </ul> <p>III. Counseling program in coping with giftedness for students and parents.</p> <p>IV. Extra-curricular courses and interest area clubs</p> <p>V. Mentorships</p> | <p>I. Access to upper level courses at entry based on proficiency examination results</p> <p>Two-Three advanced placement courses according to strength areas (16 areas available)</p> <p>Third and Fourth year of Latin and/or two-four years of another language</p> <p>II. Enrichment through special courses and seminars such as:</p> <ul style="list-style-type: none"> <li>– Art appreciation</li> <li>– Music appreciation</li> <li>– Leadership</li> <li>– Psychology</li> <li>– Anthropology</li> <li>– Urban planning</li> <li>– Political science</li> <li>– Law</li> <li>– Creativity</li> </ul> <p>III. Counseling programs that offer:</p> <ul style="list-style-type: none"> <li>– Career exploration through internships and mentorships</li> <li>– Psycho-social exploration of student strengths/weaknesses</li> </ul> <p>IV. Extra-curricular courses and interest area clubs</p> |

AREAS IN WHICH THE CATALYST'S  
ASSISTANCE MAY BE NEEDED

ACTIVITIES OR SERVICES READILY  
ACCOMPLISHED IN REGULAR PROGRAMS

| TABLE 4   | INDIVIDUALIZED BASICS  | APPROPRIATE ENRICHMENT   | EFFECTIVE ACCELERATION   | INDEPENDENCE & SELF-DIRECTION   | PERSONAL & SOCIAL GROWTH  | CAREERS & FUTURES   |
|---|--|--|--|---|---|---|
| <p>Develop advanced projects building on basic skills</p> <p>Assistance in accurate, diagnostic assessments</p> <p>Reviewing, locating developing new materials</p> <p>Cooperative planning time with other staff</p> <p>Classroom design and organization</p> <p>Obtaining and interpreting profiles</p>                     | <p>Programmed learning experiences/activities</p> <p>Flexible arrangements (many options)</p> <p>Multiple student groupings</p> <p>Learning Centers or stations</p> <p>Contracts</p> <p>Teach through inquiry and</p> <p>Learning styles</p> <p>Peer tutoring</p> <p>Higher level "how to" books</p> <p>Thinking Processes</p> <p>More than one learning activity occurs at any one time</p> | <p>Healthier and self-actualizing assignments</p> <p>Functions and activities</p> <p>Programmed learning experiences</p> <p>Team (clusters, projects, etc.)</p> <p>Type II Enrichment</p> <p>Creative problem solving</p> <p>Optional units or resources in room</p> <p>Keeping records for record-keeping</p> <p>Preparation of own projects, presenting own work to others</p> <p>Peer tutoring</p> <p>Independent Study</p> <p>Projects and contracts</p> | <p>"Compacting" or streamlining assignments and tasks</p> <p>Mastery learning</p> <p>Modifying rate and pace of tasks</p> <p>Criterion-referenced tests</p> <p>Alternative level resources in room</p> <p>Assume responsibility - evaluate own work</p> <p>Projects - develop products</p> <p>Sharing responses - building positive attitudes in room</p> <p>Survey of the occupations of families in class</p> <p>Future problem-solving program (local level)</p> <p>Games and Simulations and Learning Centers and optional activities on careers and future units of study</p> | <p>Gradual development of self-management</p> <p>planning own goals - assess own needs</p> <p>- conduct own study</p> <p>projects</p> <p>Developing positive self-image</p> <p>Working effectively in groups and on committees</p> <p>Experimenting with positive concepts</p> <p>Role-play and socio-drama</p> | <p>Biographers of creative, gifted people</p> <p>Sharing responses - building positive attitudes in room</p> <p>Survey of the occupations of families in class</p> <p>Future problem-solving program (local level)</p> <p>Games and Simulations and Learning Centers and optional activities on careers and future units of study</p> | <p>Visitors, Guest speakers, Field Trips</p> <p>Survey of the occupations of families in class</p> <p>Future problem-solving program (local level)</p> <p>Games and Simulations and Learning Centers and optional activities on careers and future units of study</p> |
| <p>Type III Enrichment - efforts to find new resources for Types I/II</p> <p>Coordinating and creating outside mentors or resources</p> <p>"Radical" action (cut across several levels)</p> <p>Off-level testing</p> <p>Cross-age tutors</p> <p>Counsel with parents</p> <p>Use University or Community College offerings</p> | <p>Findings new resources for Types I/II</p> <p>Coordinating and creating outside mentors or resources</p> <p>Reviewing, locating developing new materials</p> <p>Cooperative planning time with other staff</p> <p>Classroom design and organization</p> <p>Obtaining and interpreting profiles</p>   | <p>Testing out projects for some courses</p> <p>Advanced grade placements or double promotions</p> <p>Special advanced courses/sections</p> <p>"Radical" action (cut across several levels)</p> <p>Off-level testing</p> <p>Cross-age tutors</p> <p>Counsel with parents</p> <p>Use University or Community College offerings</p>  | <p>Advanced contracts and management forms</p> <p>Design, implement, evaluate independent projects</p> <p>Experimentation by students</p> <p>Locating and using outside audiences or markets</p> <p>Use of time, space</p> <p>Assistance from Librarian, Media Specialist, Curriculum Specialists</p> <p>K-12 Sequence of independent learning skills</p>  | <p>Counseling--dealing with special needs and problems</p> <p>Assistance in overcoming doubts</p> <p>Assessing fears or doubts</p> <p>Dealing with underachievement</p> <p>Acceptance of the ideas and feelings of others</p> <p>Tolerance for ambiguity</p>  | <p>Memorships</p> <p>Interrelationships</p> <p>Summer or after-school programs for career exploration</p> <p>Future problem-solving (area, regional, or national levels)</p> <p>Community or school service or research projects</p>  | <p>Memorships</p> <p>Interrelationships</p> <p>Summer or after-school programs for career exploration</p> <p>Future problem-solving (area, regional, or national levels)</p> <p>Community or school service or research projects</p>                                  |

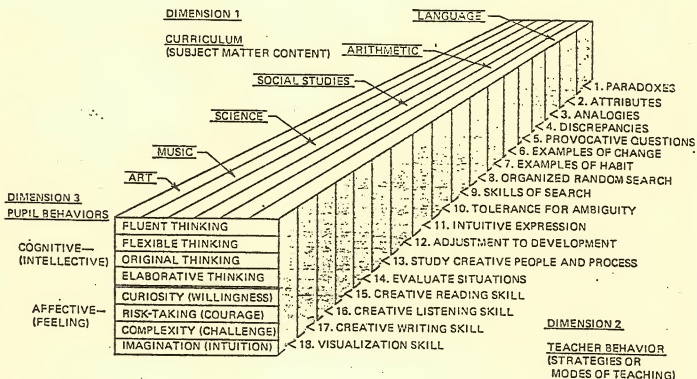
| TYPES OF LEARNING<br>(Bloom)              |               | WHAT STUDENTS DO   | WHAT TEACHERS DO  | EVALUATION   |
|---|---------------|--|---|--|
| MASTERY OF SUBJECT<br>MATTER<br>KNOWLEDGE |               | Responds<br>Absorbs<br>Remembers<br>Rehearses<br>Covers<br>Recognizes  | Directs<br>Tells<br>Leads<br>Shows<br>Delineates<br>Enlarges<br>Examines<br>Motivates     | Objective tests<br>Programmed materials<br>Memorization<br>Definitions   |
| CRITICAL<br>&<br>CREATIVE<br>THINKING     | COMPREHENSION | Explains<br>Demonstrates<br>Translates<br>Extends<br>Interprets  | Demonstrates<br>Listens<br>Reflects<br>Questions<br>Compares<br>Contrasts<br>Examines     | Work sheets<br>Objective tests<br>Essay tests<br>Discussion questions - "why"<br>Symposium panels<br>Buzz groups   |
|   | APPLICATION   | Solves novel problems<br>Demonstrates use of knowledge<br>Constructs   | Shows<br>Facilitates<br>Observes<br>Criticizes  | Objective test<br>Essay test<br>Help student structure<br>Dramatization<br>Laboratory structure<br>Case studies<br>Problem solving test<br>Constructs equipment                      |
|   | ANALYSIS      | Discusses<br>Uncovers<br>Details<br>Lists  | Probes<br>Guides<br>Observes<br>Acts as a resource  | Comparisons<br>Objective tests<br>Essay tests<br>Problem situations<br>Case studies<br>Laboratory<br>Analysis using criteria   |
|   | SYNTHESIS     | Discusses<br>Generalizes<br>Relates<br>Compares  | Reflects<br>Extends<br>Analysis   | Reading lists<br>Specialized questions<br>Problem situations<br>Term papers<br>Blueprints<br>Set of plans  |
|   | EVALUATION    | Evidences of effective learning by evaluating the growth in quality of student performance according to the aptitude, potential, ability of each individual. | Critiques<br>Essays<br>Speeches<br>Projects<br>Performances (athletic, musical, artistic) | Debates<br>"Global" problems<br>Competitive essays<br>Project constructions<br>Shop<br>Speech tournaments<br>Structural ideas (Bruner)<br>Problem situations<br>Commitment<br>Judges |

| TYPES OF LEARNING | METHODS USED BY TEACHERS AND STUDENTS   | MATERIALS USED BY TEACHERS AND STUDENTS  | PLACES USED BY TEACHERS AND STUDENTS  |
|-------------------|---|--|---|
| KNOWLEDGE         | Demonstration<br>Reading<br>Lecture, illustrated lecture<br>Drill<br>Objective test<br>Homework<br>Discussion, buzz groups<br>Resource person<br>Defining                     | Textbooks<br>Programmed materials<br>Resource person<br>Film<br>Overhead projector<br>Opaque projector<br>Tape recording<br>Phonograph recording | Large group<br>Classroom<br>Resource center<br>Library  |
| COMPREHENSION     | Objective test<br>Essay test<br>Recitation<br>Socratic dialogue<br>Discussion<br>Resource person<br>Reflection<br>Observational laboratory<br>Symposium panels<br>Buzz groups | Audio-Visual materials<br>Television<br>Resource person<br>Reference books and pamphlets   | Classroom group<br>Small group<br>Resource center   |
| APPLICATION       | Field visits<br>Laboratory<br>Shop<br>Homemaking center<br>Stage<br>Project - research<br>Quiz contents<br>Dramatization<br>Debate<br>Case Studies                            | Building materials<br>Shop equipment<br>Lab equipment  | Laboratory<br>Shop<br>Field station<br>Small group<br>Home<br>Resource center                             |
| ANALYSIS          | Analyzing - Ex 1. Role play<br>Seminar 2. La product<br>Discussion<br>Group critique<br>Independent study<br>Precise writing<br>Explain comparisons                           | Books - (non-texts)<br>Object or material to be analyzed   | Cubicle<br>Laboratory<br>Seminar room<br>Home<br>Resource center  |
| SYNTHESIS         | Informed brain-storming<br>Term paper<br>Essay<br>Planning project<br>Consultation Creative Lab.<br>Seminar Role-play<br>Independent study                                    | Collection of books  | Resource center<br>Library<br>Home<br>Seminar room<br>Concert hall<br>Museum<br>Laboratory<br>Small group |
| EVALUATION        | Seminar<br>Panel<br>Outside Tecturers<br>Debates<br>Judging products<br>Comparing theories  | Essays<br>Journals<br>Case studies   | Seminar room<br>"Coffee shop"<br>Small group<br>Resource center   |

"Williams's Model for Implementing Cognitive-Affective Behaviors in the Classroom"

A Model for Implementing Cognitive-Affective Behaviors in the Classroom

$D1 \rightarrow D2 \rightarrow D3$

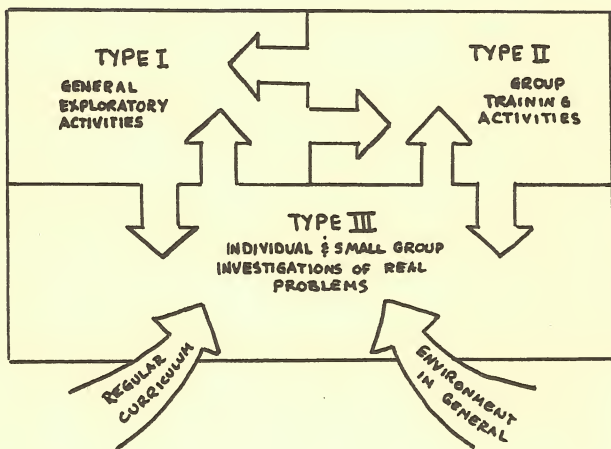


[SOURCE:] Williams, Frank E., Classroom Ideas for Encouraging Thinking and Feeling, Buffalo, NY: D.O.K. Publishers, 1970.

# DIMENSION 2 Teacher Behaviors (Strategies)

- |   |  |
|---|--|
| NO. 1 - PARADOXES                             | Common notion not necessarily true in fact<br>Self-contradictory statement or observation  |
| NO. 2 - ATTRIBUTES                            | Inherent properties<br>Conventional symbols or identities<br>Ascribing qualities   |
| NO. 3 - ANALOGIES                             | Situations of likeness<br>Similarities between things<br>Comparing one thing to another  |
| NO. 4 - DISCREPANCIES                         | Gaps or limitations in knowledge<br>Missing links in information<br>What is not known  |
| NO. 5 - PROVOCATIVE QUESTIONS                 | Inquiry to bring forth meaning<br>Incite knowledge exploration<br>Summons to discovering new knowledge   |
| NO. 6 - EXAMPLES OF CHANGE                    | Demonstrate the dynamics of things<br>Provide opportunities for making alterations,<br>modifications, or substitutions   |
| NO. 7 - EXAMPLES OF HABIT                     | Effects of habit-bound thinking<br>Building sensitivity against rigidity in ideas<br>and well-tried ways   |
| NO. 8 - ORGANIZED RANDOM SEARCH               | Using a familiar structure to go at random to build<br>another structure<br>An example from which new approaches occur<br>at random  |
| NO. 9 - SKILLS OF SEARCH                      | Search for ways something has been done before<br>(historical search)<br>Search for the current status of something<br>(descriptive search)<br>Set up an experimental situation and search for<br>what happens (experimental research) |
| NO. 10 - TOLERANCE FOR AMBIGUITY              | Provide situations which puzzle, intrigue, or<br>challenge thinking<br>Pose open-ended situations which do not force closure   |
| NO. 11 - INTUITIVE EXPRESSION                 | Feeling about things through all the senses<br>Skill of expressing emotion<br>Be sensitive to inward hunches or nudges   |
| NO. 12 - ADJUSTMENT TO DEVELOPMENT            | Learn from mistakes or failures<br>Develop from rather than adjust to something<br>Developing many options or possibilities  |
| NO. 13 - STUDY CREATIVE PEOPLE AND<br>PROCESS | Analyze traits of eminently creative people<br>Study processes which lead to problem solving,<br>invention, incubation, and insight  |
| NO. 14 - EVALUATE SITUATIONS                  | Deciding upon possibilities by their consequences<br>and implications<br>Check or verify ideas and guesses against the facts   |
| NO. 15 - CREATIVE READING SKILL               | Develop a mind-set for using information that is read<br>Learning the skill of generating ideas by reading   |
| NO. 16 - CREATIVE LISTENING SKILL             | Learning the skill of generating ideas by listening<br>Listen for information allowing one thing to lead to another  |
| NO. 17 - CREATIVE WRITING SKILL               | Learning the skill of communicating ideas in writing<br>Learning the skill of generating ideas through writing   |
| NO. 18 - VISUALIZATION SKILL                  | Express ideas in visual forms<br>Illustrating thoughts and feelings<br>Describing experiences through illustrations  |

RENZULLI  
- The Enrichment Triad Model





## THE ENRICHMENT TRIAD MODEL: A GUIDE FOR DEVELOPING DEFENSIBLE PROGRAMS FOR THE GIFTED AND TALENTED

Joseph S. Renzulli, Director  
*Teaching the Talented Program*  
*University of Connecticut*

### INTRODUCTION

The purpose of this paper is threefold. First, I would like to register some concerns about the appropriateness of many activities that parade under the banner of gifted education, activities that may be intrinsically valuable in and of themselves, but essentially indefensible as the mainstay of programs that serve gifted and talented students. The second purpose will be to present an enrichment model that can be used as a guide in the development of qualitatively different programs in this area of special education, and by so doing try to provide defensible answers to questions such as:

What is (or should be) different about the types of learning experiences that are advocated for gifted students?

Isn't what you are doing for the gifted also good for nearly all youngsters?

Unless we can provide satisfactory answers to these questions, programs that serve superior students will be extremely vulnerable to both the critics of gifted education and to persons who may be sympathetic with this area, but who also feel that special services for gifted and talented youngsters are essentially a luxury item that schools can easily get by without. But more importantly, answers are necessary for persons within the field, the true believers in special education for the gifted who occasionally experience pangs of conscience because they can defend programs philosophically but not programmatically or in terms of the day-to-day experiences that are provided for gifted youngsters. Another aspect of my concern about defensibility deals with the magic word, individualization, which is being offered by many people as a panacea for meeting the needs of gifted and talented students. Although individualized learning is an important goal for all youngsters, many educators have misinterpreted both the meaning and process of individualization

to the point where this very valuable concept has become nothing less than another piece of educational hocus-pocus. It is not uncommon, for example, to find students in well-publicized individualization programs working at their own rate of speed, but on the same worksheets and activities. This approach obviously respects certain characteristics of learners, however, individualization of rate or pace without additional differentiation in areas such as content, learning style, and teaching strategies fails to respect the total set of characteristics that bring gifted and talented youngsters to our attention.

The enrichment model that will be discussed in Part II of this paper deals with three types of different but interrelated learning activities. An effort will be made to show how certain types of enrichment are indeed good for all learners, but at the same time an argument will be made for certain approaches to enrichment that are essentially appropriate for students with the potential for superior performance in particular areas of expression.

The third purpose of the paper will be to present some practical suggestions for enriching the learning experience of gifted and talented students. Although some of these suggestions are included in the section dealing with the enrichment model, they will be mainly concentrated in Part III of the paper because this section focuses on the one type of enrichment that is considered to be especially appropriate for gifted learners. My concern for this type of enrichment grew out of an unusual phenomenon that I have experienced many times in my work with gifted programs and the persons who have a special interest in educating highly able youngsters. When these persons describe what they consider to be the most superlative examples of the work of gifted students, it is almost always about an individual child or small group of youngsters who are actively engaged in an investigation that approximates the work of professional artists or researchers in various areas of inquiry. Seldom are the group training exercises, games or puzzles to which this field seems to be particularly addicted ever listed as "show case" examples of programming. It was this phenomenon, the distinction between real investigative activity as opposed to training exercises, that promoted the development of the present model.

The ideas which follow may at times seem critical of certain practices in special education for the gifted and at other times they may appear to be an idealized blueprint that could exist only in a

theoretical never-never land. But both the criticism and the model are based on several years of firsthand experience with a wide variety of programs for the gifted and talented -- experiences which have shown me that while there are indeed many provisions that are essentially indefensible, there are also at the same time many diverse practices of unusually high quality in evidence throughout the nation. Although single or scattered practices do not make a comprehensive program, they do provide evidence that supports the feasibility of such programming. The approach used in developing this model has been twofold. First, I have tried to draw upon actual enrichment practices that are in operation in several programs for the gifted and talented. The fact that these practices have not always existed under one roof might make the model vulnerable to the criticism of idealism; however, the very existence of the practices lends support to the possibility of comprehensive programming. Second, an attempt has been made to base the model on what we actually know about giftedness rather than the romantic notions that seem to abound in the platform rhetoric and popular literature. Thus, one section of the paper will appear to be rather "researchy," but I feel that it is important for program practices to be a fairly faithful reflection of the generally agreed-upon characteristics of the gifted individual.

The model that is developed in Part II of this paper calls for some mildly radical reforms in the ways that we go about providing for gifted and talented students. Teachers who have become accustomed to randomly selecting a kit or game from the shelf may be somewhat threatened by the model because it suggests the need for some new skills in learning management. And administrators and teacher trainers might be mildly threatened because there is a clear implication that we have not provided the kind of leadership and in-service training that leads to a defensibly different set of experiences for the gifted and talented. Finally, the model may be a threat to persons who believe in the supremacy of the IQ because the ideas that are developed herein offer a rationale for not necessarily selecting students strictly on the basis of high ability measures.

As with all models and plans for educational restructuring, there are certain problems that cannot easily be overcome. Because of the writer's own limited experiences in the arts and with primary age children, the present model lacks fullness and exemplification in these areas. It also fails to take into consideration those youngsters who are simply good lesson learners but who seem to lack the capacity to become turned-on to investigative activity. For these and

undoubtedly other reasons the material that follows will not answer all questions, but if the model serves the purpose of simply calling attention to some of the things that have been overlooked in total programming, then I feel that this effort will have been worthwhile. And if the model provides some persons with a plan around which they would like to organize their program, then I will be delighted.

## I. WHAT WE CAN'T DEFEND

My first concern about present day practices in gifted education grew out of a variety of experiences, the most notable being a long standing involvement in the evaluation of programs that serve youngsters of unusually superior ability.

An almost universal finding in my evaluation work has been that gifted students enjoy taking part in special programs! In trying to discover the reasons for such enjoyment I find that two types of responses almost always lead the list. The first is simply that they enjoy the freedom of choice regarding the activities in which they engage in special programs and the second is that they like freedom from the usual pressures often associated with getting assignments in on time, taking tests, and having to complete work in a very restricted environment -- an environment with inflexible time allocations, prescribed textbooks and other resources, and limited choices in the ways in which they go about carrying out their work. I am very much in favor of these reasons for student satisfaction. At the same time, however, it has occurred to me that students frequently like their special program for the same reason that they like recess! It is difficult to pursue this topic without sounding like some kind of ogre who is against freedom of choice and a free and open learning environment, so let me emphasize that I believe these two things should be absolute essentials in any program for the gifted. In fact, it is precisely these things that I always recommend as the first program objective for guiding the education of gifted and talented students.

## Program Objective No. 1

*For the majority of time spent in the gifted programs, students will have complete freedom to pursue topics of their own choosing to whatever depth and extent they so desire; and they will be allowed to pursue these topics in a manner that is consistent with their own preferred style of learning.*

In conducting evaluative studies, however, I have witnessed far too many programs for the gifted that are essentially collections of fun-and-games activities; such activities lack continuity and show little evidence of developing in a systematic fashion the mental processes that led these children to be identified as gifted. On many occasions I have observed children walking into a resource room for the gifted, taking a game off the shelf (sometimes a very challenging and exciting game), playing the game until their class period is over, and returning the next day to engage in some similar type of activity. In questioning teachers about the purpose or objectives of such activities, the standard reply is almost always that it is "challenging" and that the children are "really enjoying," what they are doing.

The feedback from the students in situations such as this is almost always superlative, but I think that you can see why I have compared this situation to recess or some other type of recreational activity. Although I firmly believe that gifted students should have a generous opportunity to participate in a wide variety of exploratory experiences and activities that might be described a recreational thinking, I also believe that an important part of all programs for the gifted should focus on the *systematic* development I simply mean that we as professional educators in a specialized area should know and be able to defend the types of processes that are being developed through the activities that gifted children pursue in special programs. I firmly believe in freedom of choice so far as topic and learning style are concerned, but I also believe that once a youngster has decided upon an area that he or she would like to pursue, it becomes the teacher's responsibility to assist that youngster in developing the skills of inquiry that will make him or her a "first-hand inquirer" in the particular area in which he or she chooses to work.

almost complete absence of interest in the structure, methodology and content of the organized fields of knowledge. In emphasizing mental processes *à la* Bloom's Taxonomy and Guilford's Structure of the Intellect Model, we may have been putting our energy in the wrong place -- we have talked a good game about designing curriculum that will develop the higher mental processes but I'm not certain if the valid *psychological* concept of mental process has been a useful *educational* concept so far as curriculum planning is concerned.

Let us assume for a moment that there is a wide variety of readily available lessons that fill every conceivable cell of Guilford's Structure of the Intellect Model on every level of Bloom's Taxonomy. The process based curriculum materials with which I am familiar are, by development of very specific types of mental activity.\* In their seemingly noble goal of targeting in on a particular process, such as experiences that we in gifted education are supposed to be providing. On several occasions I have observed lessons in which the instructor has tried to "force-out" in a predetermined fashion each process in Bloom's Taxonomy or Guilford's Model. I must say that these lessons were somewhat less than inspiring so far as student freedom was concerned. Frequently the lessons were rigid experiences and reminded me in many ways of programmed instruction or the fishing-for-facts approach that characterized the content-centered curriculum. The instructors were still fishing for highly predetermined responses; and although the fish that they were trying to catch was a little different, the bait and the game of fishing remained the same. So now, instead of filling kids' heads

\* Materials that are directed toward the development of interpersonal awareness and group process skills also possess moderate to high degrees of structure. Although persons in effective education may protest this statement, the fact remains that most human relations activities are planned and directed by teachers or curriculum developers, are carried out in a predetermined sequence, and are designed to evoke relatively similar responses on the parts of participants. The activities may be "open" in the sense that students are allowed greater freedom of response, but a great deal of structure is imposed on the overall experience and students quickly learn that even open-ended exercises lend themselves to certain types of gamesmanship.

Another aspect of my evaluation work has frequently led to a somewhat disappointing finding. In questioning gifted youngsters about projects on which they have worked in their special programs, I often have discovered that with the exception of freedom of choice in topic selection and a greater amount of flexibility in the ways that they can pursue their topics, there has been very little difference between regular and special programs so far as the level or quality of inquiry was concerned. I frequently asked youngsters, "What was the most interesting or creative thing that you did this year in your special program?" After asking the youngsters to tell me a little about their projects or products, I then raised questions about the ways that they pursued their goal. "What types of references did you use? What did you learn from this project? What was the purpose of the study? If you were doing this same project in your regular classroom what would you do or have done differently?"

Frequently the answers come back in a somewhat less than imaginative fashion. The references consisted of the same encyclopedia or library books to which they would have access in the regular school program. Responses to questions about what they learned often were expressed in terms of knowledge or facts; and answers to questions about differences between the regular school program and the special program were almost always answered in terms of freedom of choice, lack of pressure, and the absence of grading. Sometimes the only difference was that they did their work on a rug on the floor rather than seated at a desk or at a library table. I must reiterate that I am in favor of freedom of choice, lack of pressure, and even rugs on which children can work more comfortably, but once in a while, I would like to have some of my questions answered in terms of *qualitative differences in the instructional process*.

Evaluative findings such as these have caused me to raise serious questions about the defensibility of special programs for the gifted and talented. Are we really doing anything different with these children aside from providing them with a freer atmosphere in which they can take a break from the boredom and routine of the regular classroom and perhaps play games that are interesting but largely irrelevant to their overall development?

A second general area of concern has been a preoccupation on the part of leaders in gifted education with mental processes and an

with isolated facts and figures as we did in the content-centered curriculum, we are filling each "cell" with isolated processes according to a structure and predetermined lesson plan. In the face of such structure and predeterminism, I wonder what has happened to our respect for the "freedom-of-choice-objective" that we talk so much about in programming for the gifted and talented.

All of this is not to say that I am against process objectives or that I do not believe these psychological phenomena actually exist *and* can be developed through good programming. But more and more I am coming to realize that they are things that "just happen" in good learning situations, and the harder we try to force processes into a behavioral objectives type of format, the more artificial and structured the curriculum will become. Our preoccupation with process objectives has caused us to forget that *process is the path rather than the goal of learning*, and unless we view processes in this manner, there is a danger of trying to ram them down students' throats in much the same way that we force-fed youngsters with facts and figures.

My concern about a preoccupation with process started to emerge a few years ago when I was the general consultant to a curriculum development project for the gifted that involved the wisdom and guidance of scholars in a variety of the academic disciplines. When we tried to "sell" these scholars on the taxonomic approach to curriculum development, they told me in their own polite manner that this was *not* the way that they go about investigating their areas of specialty. Without being too insulting, they implied that the taxonomic approach was a kind of phoney educationese -- they bought the processes as psychological phenomena, but simply said that they were not useful so far as designing learning experiences was concerned. Time after time, when the educators who worked on the project tried to structure the curriculum around the taxonomies, the scholars resisted and instead, tried to devise learning activities that pretty much followed the way that *they* went about investigating problems in their respective areas of knowledge. The enthusiasm and excitement that the scholars displayed when talking about the *methods* they used for investigating a topic led me to the realization that an ideal model for the education of gifted students should be "the turned-on professional" or "first-hand inquirer" in any and all areas of study. By the turned-on professional I simply mean the person who is actively engaged in solving problems and adding to the body of knowledge in his or her

discipline; the researcher and inquirer as opposed to the practitioner or person who simply uses new discoveries (the medical researcher as opposed to the family doctor; the composer as opposed to the person who plays the musical instrument according to the score).

It was at this point that some of the things I had read in the literature on giftedness and curriculum began to come together. I recalled Ann Roe's (1952) classic study of 64 eminent scientists in which she pointed out that the single most important factor in the final decisions of these persons to become scientists was the sheer joy of discovery, of finding out about things that were new to them. I also recalled one of Virgil Ward's (1961) fundamental principles underlying differential education for the gifted, that superior students should become acquainted with the basic methods of inquiry within the various fields of knowledge. The mastery of methodology, Ward argues, will both increase the learner's understanding of the discipline and, at the same time, provide him or her with the tools that are absolutely necessary for making new discoveries. In a similar fashion Philip Phenix (1964) points out in his book, *Realms of Meaning*, that learning methods of inquiry is valuable because methods are by definition ways of actually *doing* something -- modes of active investigation. Isn't this what we're seeking in gifted education -- active rather than passive learners? If a youngster learns how to actually *do* legal, or historical, or anthropological research, then he or she can become an active inquirer rather than a mere recipient of other people's facts and discoveries. Phenix also points out something about methodology with which few will argue. Knowledge is continually undergoing modification and increasing in geometric proportions. "While it may prove impossible for a person to keep pace with the advancing tide of knowledge in a discipline, he may be able quite satisfactorily to remain abreast of the methods of inquiry in it." (p. 334).

The above statements by Roe, Ward, and Phenix may strike the reader as being appropriate for the adult researcher, such as the scientist in her laboratory or the composer at his piano, but can we really apply the model of the turned-on professional to young children? Although learning theorists still debate what should be the right and proper model for guiding children's learning, research studies support the belief that elementary and high school students can in fact engage in serious scholarship. Jerome Bruner studied the behavior of young children as they pursued knowledge in the

traditional disciplines -- mathematics, physics, chemistry, history -- and found the "children of elementary school age are capable of engaging in critical inquiry" (Massachusetts and Cox, 1966, p. 40). It was his research that led to Bruner's famous and often quoted statement:

... intellectual activity anywhere is the same, whether at the frontier of knowledge or in the third-grade classroom. What a scientist does at his desk, or in his laboratory, what a literary critic does in reading a poem, are of the same order as what anybody else does when engaged in like activities -- if he is to achieve understanding. The difference is in degree, not in kind. The schoolboy learning physics is a physicist, and it is easier for him to learn physics believing like a physicist than doing something else (p. 14).

The extent to which all students can pursue knowledge as a first-hand inquiry or turned-on professional is not yet known. As far as gifted students are concerned, however, the history of human achievement (and indeed, the history of many programs for the gifted) is filled with examples of bright young people who not only emulated the methods of professionals, but who were in fact professionals themselves. Gifted kids can unquestionably function in the manner of true inquirers and it is for this reason that I believe the second general objective of programs for the gifted should be to develop in each youngster the skills necessary for advanced levels of inquiring in his or her areas of interest.

## Program Objective No. 2

*The primary role of each teacher in the program for gifted and talented students will be to provide each student with assistance in (1) identifying and structuring realistic solvable problems that are consistent with the student's interests, and (2) acquiring the necessary methodological resources and intellectual skills that are necessary for solving these particular problems.*

I first became interested in the second program objective of gifted education when I began to examine the assumption that programs for the gifted should be concerned with the higher mental processes and the logical implication that follows -- education for averages and slow students should focus on the lower mental processes. This assumption is patently ridiculous. I believe that all students should develop their powers of creativity, critical thinking, analysis,

evaluation, etc. I believe that sensitivity to social issues, concern for human values, and the development of a healthy self-awareness should be important educational goals for all people regardless of whether or not they have been classified as gifted. Furthermore I believe that gifted students must put in some "quality time" on the so called lower mental processes -- plain old knowing and understanding. Contrary to what some of the waxes would have us believe, knowledge is important, and comprehension is necessary, not as ends in and of themselves, but as stepping stones to the more creative and productive endeavors that we typically associate with persons in the gifted or genius category.

In his book, *The Nature of Human Intelligence*, J.P. Guilford points out that one way in which a genius exceeds ordinary persons is that he or she possesses a wealth of stored products of information (p. 319). According to Guilford, there is considerable recall of information and transformational activity whenever the creative / productive person is engaged in the development of a new product, idea, or type of information.

Before I go any further, let me hasten to assure you that I am definitely not advocating a return to the content-centered curriculum or the type of teaching that dealt largely with the accumulation and regurgitation of facts. Those were the "bad-old-days" that emphasized knowledge for the sake of knowledge. Such an approach unquestionably resulted in the vast amount of criticism that has been justifiably leveled at the educational establishment, and this is precisely the type of learning that we are against in gifted education. But at the same time I am interested in the role that knowledge and information processing play in the education of gifted persons, and I feel that one of the easiest ways that we can escalate the ways in which he or she goes about selectively retrieving, managing, and using various types of information in the process of first-hand and discovery and creativity. In Part III of this paper an attempt will be made to develop a set of guidelines for promoting this type of enrichment. But before we delve into the details of managing this particular type of enrichment, it is first necessary to examine the general nature of three types of enrichment and their relationship to one another. Thus, the section that follows will elaborate on the procedures and responsibilities of the final section will elaborate on the only type of enrichment that may be uniquely appropriate to gifted and talented students.

## II. THE ENRICHMENT TRIAD MODEL

This section will describe and attempt to show the relationships that exist between the three different types of enrichment that are presented in Figure 1.\* The first two types, General Exploratory Activities and Group Training Activities, are considered to be appropriate for all learners; however, they are also important in the overall enrichment of gifted and talented students for at least two reasons. First, they deal with strategies for expanding student interests and developing the thinking and feeling processes and for this reason they are viewed as necessary ingredients in any enrichment program. Second, and perhaps more importantly, these two types of enrichment represent logical input and support systems for Type III Enrichment which is considered to be the only type that is appropriate mainly for gifted students. Type III Enrichment, entitled Individual and Small Group Investigations of Real Problems, is the major focus of this model and the proportions suggested in figure 1 are intended to imply that approximately one-half of the time that gifted students spend in enrichment activities should be devoted to these types of experiences. Because of the importance of Type II Enrichment in the present model, it will be dealt with in two different ways. In this Section, Type III experiences will be described and a rationale will be developed to support the assertion that investigations of real problems should be the mainstay of programs for the gifted and talented. In the final section of the paper, specific suggestions will be offered in an effort to provide some practical guidance for implementing Type III experiences. Although some practical suggestions regarding Types I and II are discussed in the present section, these two types of enrichment have received a great deal of attention in contemporary educational literature and therefore, will be discussed here only as they interrelate with Type III.

Before getting into a description of the three types of enrichment, however, I would like to point out a few assumptions underlying the model. The first assumption relates to the way in which I will define the entire concept of "enrichment." By enrichment I simply mean experiences or activities that are above and beyond the so called "regular curriculum." Since I am defining enrichment in relation to other aspects of the regular school experience, I would like to discuss briefly a few concerns about the regular curriculum and how it relates to the concept of enrichment.

\*Available from author

A great deal of our energy in gifted education has been expended on citing the ills and woes of the so called regular curriculum, and there is indeed much justification for such criticism. But because we live in a "credentialing" society, one in which youngsters must pass SAT exams and possess certain basic skills to climb educational and career ladders, I will make two simple assumptions about the regular curriculum. First, there are indeed certain basic competencies that all students should master in order to adapt effectively to the culture in which they are growing; and second, the mastery of these competencies should be made as streamlined, exciting, and relevant as possible. This is true for all students, and especially for those youngsters who can master basic competencies in a highly efficient and rapid manner. I am certain that you will agree that gifted programs would be in serious trouble if high potential students fell behind on basic skills or if they failed to get into college because of poor scores on admission examinations (Witness the recent congressional concern about the continuous drop in SAT scores and critical articles in news magazines about incompetency in basic skill areas. Ego see, "Why Johnny Can't Write," *Newsweek*, - December 8, 1975.) But rather than attacking the regular curriculum, I have simply learned to live with it and hope that it will improve through evolution (and perhaps through some influence from the types of experiences that are being advocated in gifted education). We may not agree with the hurdles that students must jump in a credentialing society, but we should not be naive enough to pretend that these hurdles do not exist.

The word "enrichment" is, of course, as old as the field of education itself; in a certain sense it is impossible to disagree with persons in general education who are fond of expounding irrefutable truisms such as "all curricular experiences should be enriching for all students," and "there is no such thing anymore as the regular curriculum; we individualize the curriculum for all of our students." But these statements are more nearly idealistic rhetoric than reality; and even in schools which make much fanfare about that magic work, individualization, it is a reality that most youngsters spend most of their time covering a common body of prescribed material at each grade level. They may cover the material at different rates of speed, but there are very few youngsters who don't jump through essentially the same set of hoops.

It is, however, precisely because the regular curriculum (even in its most excellent manifestations) fails to meet the needs of all

students that we require special provisions for some youngsters, and in the case of the gifted and talented, these special provisions almost always take the form of some type of curricular enrichment. In its simplest form, enrichment may be merely a matter of introducing gifted students to advanced courses early. This practice, sometimes referred to as vertical enrichment or acceleration, usually consists of allowing students to enroll in courses to which they would not ordinarily have access until later years. Although this approach lacks imagination so far as curricular reconstruction is concerned, it may very well be appropriate in subjects such as mathematics, physics, and computer science that are highly structured and sequential in concept complexity. Placing a youngster in an advanced course may indeed take care of his or her need to be challenged and to interact with equally advanced peers, and a more specialized instructor, however, such placement may respect only one dimension of the learner -- his or her paced advanced ability. I am not against acceleration or advanced placement courses, but the word "course," automatically implies a certain amount of structure and uniformity; and my experience has been that when youngsters have simply been enrolled in advanced courses without any concern for two other important dimensions of the learner, then everyone ends up marching to the tune of the same drummer, albeit at a faster beat.

This leads me to the second assumption underlying this enrichment model. The learner has two other dimensions that must be respected in an enrichment situation, and even an advanced course may fail to take account of or of (1) the student's specific content interests and (2) his or her preferred style (s) of learning. An almost universal finding in the evaluation work that I have done in numerous programs for the gifted has been that the greatest source of student satisfaction almost always resulted from the students' freedom to pursue topics of their own choosing in a manner which they themselves felt most comfortable. Thus, the second underlying assumption is that enrichment activities (with the possible exception of some "Type II activities") must show complete respect for the learner's interests and learning styles, and that the point-of-entry for all enrichment must be an honest and sincere desire on the part of the student to pursue a particular topic or activity of his or her own choosing. Piaget has pointed out many times that all learning should emanate from the spontaneous interests and activities of students. Although there may be some disagreement with this statement so far as certain basic or required skills are concerned, I believe that student interests should be the cornerstone of all enrichment.

At least three general guidelines are suggested to help achieve the objectives of Type I Enrichment. First, although a great deal of enrichment activities should be selected for particular groups of students, enrichment situations is to assist teachers in making decisions about the kinds of Type II Enrichment activities that should be selected for particular groups of students. A second objective of Type I Enrichment activity for a single youngster or small group of students who have a common interest, is to assist teachers in making decisions about the kinds of Type II Enrichment activities that should be selected for particular groups of students. A third and final assumption underlying the model has to do with when and where enrichment opportunities are offered. Since the model deals with basic aspects of learning, I have no prediction about the physical circumstances under which enrichment experiences should take place. It could be in the regular classroom as an extension of the regular curriculum or it might be in a special resource room or independently carried in the library. It might take place in the community (indeed, Socrates did it in the market place in Athens), in a college classroom or laboratory, or even through a correspondence course in which the student never comes face-to-face with his or her instructor. It might involve one child or many children, and it does not necessarily require that only gifted children be involved in certain group projects which hold enrichment opportunities. The unique feature is, however, that if a particular student has a superior potential for performance in a particular area of sincere interest, then he or she must be allowed the opportunity to pursue topics therein to unlimited levels of inquiry.

#### Type I Enrichment: General Exploratory Activities

Type I Enrichment consists of those experiences and activities that are designed to bring the learner into touch with the kinds of topics or areas of study in which he or she may have a sincere interest. A good Type I Enrichment situation should involve very little structure, and at the same time, students and teachers should be aware that these situations have very purposeful objectives. By providing students with a wide variety of opportunities to become exposed to different areas of potential interest, youngsters can begin to explore a greater depths and higher levels of involvement. Thus, one of the major objectives of Type I Enrichment is to give both students and teachers some hints about what might be a *bona fide* enrichment activity for a single youngster or small group of students who have a common interest. A second objective of Type I Enrichment situations is to assist teachers in making decisions about the kinds of Type II Enrichment activities that should be selected for particular groups of students.

At least three general guidelines are suggested to help achieve the objectives of Type I Enrichment. First, although a great deal of enrichment activities should be selected for particular groups of students,

platory freedom must be permitted, students should be aware from the very beginning that they are expected to pursue exploration activities purposefully; and that after a given period of time has elapsed, each youngster will be responsible for analyzing his or her own experiences and coming up with some alternative suggestions for further study. The amount of time required for exploratory activities will, of course, vary with each student and experience has shown that many students will know from the very beginning which areas or topics hold special fascination and warrant further investigation along the lines that will be proposed in the section of this model dealing with Type III Enrichment: long-standing interests that have grown out of the regular curriculum or the environment in general (see Figure 1) are "naturals" for Type II Enrichment and should usually be given priority consideration in the design of in-depth investigations. There may, however, be times when it will be wise to encourage certain students to broaden the scope of their interests by exploring areas with which they have had no previous experience. A youngster who, for example, has a singular and deep-seated interest in geology should not be discouraged from pursuing this area of study, but at the same time, he or she should at least be systematically exposed to other fields of potential interest and encouraged to broaden his or her horizon.

There will also undoubtedly be some youngsters who take what appears to be unusually long periods of time before they "settle down" to an area of heightened interest or enthusiasm. Many of these youngsters view Type I Enrichment as an end, in and of itself; and although they may have the capacity for generating a large variety of interests, they somehow lack the motivation to follow through on any single topic for periods of time.\* A great deal of patience and genuine encouragement is quite necessary

*\*The short-term nature of student interests is sometimes a function of the ways in which special programs are designed. The following description of a one-day-per-week enrichment program for the gifted suggests how the program structure encourages transitory rather than in-depth enrichment: "The teacher starts off the day with a business meeting on the rug in the front of the room. The youngsters discuss what type of individual or group projects they would like to do that day." Visitation to this program confirmed my suspicion that there was very little carry over from week-to-week (it was essentially a "make-it-and-take-it" type of experience), and thus, very little opportunity or encouragement to pursue interests.*

such cases. Students who feel pressured into deciding on a project may very well select a topic of superficial interest in an effort to please the teacher or "play the game." When this happens, we have lost out on the honesty and sincerity of student interest (the "point-of-entry" for all Type II enrichment), and in all probability, the overall enrichment experience (i.e., beyond Types I and II) will end up being less than satisfying for both teacher and student. Students who simply cannot or will not engage in anything but exploratory activities should be reevaluated and perhaps counseled out of the enrichment program, not as punishment, but because it is in their own best interest. If the overall program objectives place major emphasis on self-motivated Type III Enrichment activities, then students who for one reason or another do not profit from these activities may be better off in the regular school program.<sup>8</sup>

The second guideline for achieving the objectives of Type I Enrichment deals with strategies for exposing students to a wide variety of topics or areas of study from which they might like to select problems for in-depth investigations. Developing categorical interest centers in the classroom or resource room and stocking these centers with materials that are broadly representative of selected themes or fields of knowledge will help to expand students' perspectives on particular areas of study. The selection of appropriate materials for the interest centers is especially crucial because *our objective here is not simply informational*, but we are attempting to provoke curiosity about the dynamic nature of a field and an interest in doing further research. Thus, it is recommended that the materials in each center include descriptive information about particular fields of knowledge in a given field. For example, a center on Historiography (rather than History!) should include books that capture the excitement and joy of discovery that a historian experiences when he or she uncovers an overlooked document, and unpublished letter, or an old newspaper that sheds new light on an important problem. Descriptions of the work of historians and the con-

*\*Part of this assertion is based on the writer's belief that motivation, sustained interest, and commitment to a topic or task are themselves basic characteristics of giftedness. Research has shown that the ability to stick with a problem over a long period of time has resulted in many great human accomplishments; and thus, I believe that these non-cognitive characteristics should be basic considerations in selecting and retaining youngsters in special programs.*

contributions that they have made by imaginatively reconstructing the events of the past are much more relevant to the objectives of Type I enrichment than the usual references that we typically associate with the study of history or the history section of the school library. Books (or other materials) that deal with information about subjects should answer questions such as:

- Why do we study history?
- What does history do for mankind?
- What kinds of questions does the historian ask and of whom?
- Where does the historian look for evidence?
- What are some of the great discoveries of historians?
- What are the different types of historians and in what ways is history categorized?
- What qualifies as a historical document?
- How does the historian move from raw data to conclusions and generalizations?

Perhaps the following books will serve as further examples of what is meant by information about a field of knowledge rather than collections of accumulated information in the field itself:

- Carr, Edward H.: *What is History?* Alfred A. Knopf, Inc., New York, 1962. A very good volume on the nature of history. The author stresses the need for historical objectivity and presents the notion that history is an ongoing dialogue between the past, the present, and the future.

Collingwood, R. G.: *The Idea of History*, Oxford University Press, Fair Lawn, N. J., 1946. Townshirts of this book traces the development of the author's own particular notions of history as part of the re-creation of human thought in its historical context.

"A careful distinction should be made between this objective and the type of objective that is implicit in the following description of a similar classroom arrangement: 'The Interest Areas are set-up with different and task cards for each topic. Children will usually start with the easiest exercise or task card and progress through the more difficult cards.' This statement, taken from a program proposal, expertly suggests a developmental orientation in which the child is expected to gain some proficiency in a particular skill or concept. Involvement in this type of Interest Area may indeed generate interest in a certain topic or area of study, but the primary objective is to develop skill in an area of existing interest rather than to explore new areas of potential interest."

Gotteschalk, Louis (ed.): *Generalization in the Writing of History*. The University of Chicago Press, Chicago, 1963. A symposium by eminent historians on the role of generalization in history. While many divergent points of view are presented, there is agreement that no historical accounts of events or periods can avoid making generalizations.

Huges, H. Stuart: *History as Art and as Science*, Harper and Row, Publishers, Incorporated, New York, 1964. The author views history as a discipline which draws ideas and methods from the behavioral and social sciences and from the humanities. Chapter 3 presents the contact points between history and psychoanalysis in explaining human motives.

Potter, David M.: *People of Plenty*, The University of Chicago Press, Chicago, 1954. A severe indictment of historians in their study of national character. Advocates that historians should be increasingly use the methods of the behavioral and social sciences and proceeds to illustrate how this can be done on the topic of American national character. (Massachusetts and Cox, 1966, pp. 57-58)

Winks, Robin W.: *The Historian as Detective*, Harper and Row, Publishers, New York, 1968. This lively collection of essays focuses on the theme that historians must collect, interpret, and explain evidence using many of the same techniques employed by detectives conducting criminal investigations. Parallels can also be seen between the work of historians and present-day "investigative journalism."

Note that in the case of each of the above books, we are dealing with descriptions about the subject of history and the work of historians rather than the facts and findings of persons who have worked in this field. Although materials of this type should be the major focus of interest centers, other types of high interest material might provoke in some youngsters the idea that they also can do investigation in their home town. Or books that deal with particular aspects of history (e.g., military, diplomatic, ecclesiastical) may serve as examples of how historians in the real world specialize on very limited segments of this vast field of knowledge. Other materials that might spark ideas in the minds of budding young historians include copies of old newspapers, photocopies of sample

town documents, old maps, railroad timetables, or advertisements, and perhaps some sample records from businesses that have served the community for many years. If your town has a local historical society perhaps they might loan various materials for display in the interest center. Additional materials can probably be obtained from the state historical society or director of archives, and college, state or local librarians may be able to provide you with copies of any and all books that deal with the history of your area. Interest centers might also contain some materials that describe career opportunities in various fields and information such as brochures, newsletters, and journals that are published by professional societies and organizations. Local or state department of education specialists in career education can provide valuable assistance in locating these types of materials.

The development of a successful interest center can be a very creative endeavor on the part of the teacher. Although some informal guidelines have been offered here, the teacher's own experience and imagination should be exercised to the fullest in making the interest center come alive with thought provoking materials. Students who have completed investigations in particular areas may want to contribute their products to the centers and also recommend items that they think will be highly stimulating to other youngsters. If other young people from throughout the nation (or world) have done outstanding work in a certain area of knowledge, descriptions or samples of these materials (see Appendix A) should be included in order to help students realize that age is not a limiting factor in making contributions to various fields of art and knowledge.

The development of interest centers in obviously a task that cannot be accomplished overnight, however, a continuous effort on the part of all persons working in the gifted program can result in a wide variety of exploratory alternatives. In order to provide options that will meet the diversified interests of all students it is recommended that a long range goal be established to provide interest centers in the following area:

1. The Social Sciences -- Broadly conceived to include areas not ordinarily covered in the regular curriculum such as anthropology, economics, political science, psychology, sociology, demography, and the judicial and legal sciences.
2. The Physical and Life Sciences

3. Mathematics and Logic
4. Music, the Visual Arts and the Arts of Movement and Dramatic Production -- including puppetry, film making, set design, improvisation, interviewing, public speaking, choreography, play production, clothing design, interior and landscape architecture, and all types of crafts.
5. All Aspect of Writing -- including advertising, literary criticism, journalism, and technical writing as well as the more common areas of written expression such as poetry, play writing, short stories, autobiography, etc.
6. Philosophy, Ethics, and Social Issues-- including critical contemporary problems that are controversial because they involve judgments based on morals or values (e.g., welfare, due process, civil rights, political corruption, etc.)

Additional and specific topics around which interest centers might be developed will undoubtedly occur to persons who are sensitive to the concerns of particular age groups. Although a wide diversity of topics or areas of study in obviously desirable, the most important condition for the successful interest centers is that they contain dynamic material with the power to turn-on youngsters to the possibility of doing further research in a particular area. Students should be provided with ample time to browse through the interest centers, to discuss items that hold special fascination with the teacher and other students, and to further explore a topic beyond the material that is included in the center. This role of the teacher in this process is especially crucial, for it is at this point that a decision should be made regarding whether or not the student might like to become an investigator in an area where some curiosity or concern has been motivated. Some of the strategies for helping students to structure investigations that grow out of areas of interest will be discussed in a later section of this paper dealing with Type III Enrichment, but it is important to point out at this time that an expression of interest on the part of a student may not necessarily mean that he or she wants to further pursue a topic. The teacher should not "jump-the-gun" by imposing a project on a student, but rather explore some of the possible investigations that might be made in relation to and expressed interest. And above all, the teacher should avoid suggesting that the student "do a report" about the material that the student has found to be of interest because, as will be pointed out later, doing a report is frequently a recapitulation of existing material rather than an investigation that

Thus far we have only discussed interest centers as one possible strategy for achieving the objectives of Type I Enrichment but at least two other methods should be utilized. Visitation or field trips

to places where dynamic people are actively engaged in problem

solving and the pursuit of knowledge will no doubt stimulate in-

terest in many youngsters; however, caution should be taken to offer

gifted students visitations that go beyond the simple "museum ex-

periences." If "museum experiences" I mean situations in which

students merely play a part or ballet, or are given a guided tour of

an art gallery or nuclear power plant. These are valuable and infor-

mative types of enrichment that should be offered to all youngsters,

but in order to serve the purposes of Type I Enrichment, high ability

students should be given the opportunity to go beyond the elemen-

tary look-and-see level that characterized many visitations and field

trips. These experiences can be escalated for gifted and talented

individuals by providing them with opportunities to interact with ar-

tists, curators, actors, choreographers, and engineers, by allowing

youngsters to observe these persons *at work* and perhaps by ac-

tually taking part in some of their activities, if only in a very small

way. Such involvement will allow highly able students to probe

beyond the superficial aspects of various professions or fields of

knowledge. An ordinary museum experience usually involves

looking at things that are of general interest to almost all

youngsters whereas an escalated experience should provide op-

portunities for *hooking into* and *becoming involved with* that which

is on display, being presented, or being produced.

Another strategy for promoting Type I Enrichment consists of in-

volving resource persons to make presentations to groups of gifted

students; however, the same logic that holds true for field trips

should be applied here. Resource persons should be carefully selec-

ted in an effort to involve individuals who are actively engaged in

contributing to the advancement of art or knowledge in their respec-

tive areas of endeavor. Local historians, poets, dancers, architects or

photographers who are "turned-on professionals", who feel that they

are creatively reconstructing the fields in which they work or to

which they devote some of their leisure time, these are the types of

persons who are especially appropriate as human resources for gift-

ed and talented youngsters. Indeed, one of the reasons that we have

selected particular students for participation in special programs is

324

because we believe that they have a superior potential to develop their capacity for creative production. Thus, it seems only logical to escalate the entire concept of using community resources by bringing these students into contact with persons who are themselves creative producers.

Interest centers, field trips, and exposure to community resource

persons are, of course, organized approaches to Type I Enrichment;

however, students should also be given opportunities to look into

any and all types of topics that are available. Simply browsing in

libraries or bookstores or participating in unstructured group

discussions may yield favorable results. These discussions might be

based on an "interest focusing-question" (e.g., What would you like

to be said about you at a testimonial dinner given at the time of

your retirement?) or an interest questionnaire (See Appendix B). It is

important, however, for students to constantly and consciously

keep the goal of general exploratory activity in mind. Although ex-

ploration should be enjoyable and have personal growth value in

and of itself, each student should keep in mind that exploratory ac-

tivities are a rare opportunity that seldom presents itself in the regular

curriculum, an opportunity that seldom presents itself in the regular

school program. It is also an opportunity for students to get in touch

with their own interests and concerns, and thus has value as a self-

actualization experience.

The third and final guideline for helping to achieve the objectives

of Type I Enrichment deals with the direction that exploratory ac-

tivities should give to teachers in selecting Type II Enrichment ac-

tivities. As will be pointed out in the following section, a vast array

of process-oriented materials are available for individual and small

group activity; however, some rhyme or reason should exist for

deciding which materials should be used with particular youngsters.

The teacher must be a sensitive observer of the spontaneous ac-

tivities of his or her students so that if one group of youngsters

shows an interest in politics, for example, the teacher may then

decide to use a simulation game which deals with various processes

of political decision making (e.g., *Politics*, *Party Nomination Game*,

*Politics in Benin, Demora, or POLIS* - Political Institutions

Simulation). Another group, however, may be extremely interested

in rocks and minerals, thus leading the teacher to decide that some

exercises in the process of classification (using science materials)

might be of value. And thus, some group training in creative

325

dramatics may be warranted. Although group exercises should be open to all who would like to participate, they should nevertheless always emanate from the interests of at least some youngsters. This rationale for selecting Type II activities will help to respect the first objective of programs for the gifted which places major emphasis on the interests of students.

Two final points should be made about Type I Enrichment. First, general exploratory activity is a cyclical or ongoing process, and although students may be extremely involved in one or more projects, they should continually be given opportunities to broaden their experience and generate new interests. They may want to investigate these interests more intensively at another time, or they may simply enjoy having a brief exposure to a new topic, author, or idea. It is important to keep in mind that exposure and the opportunity to explore are themselves very important objectives of Type I Enrichment and therefore, these opportunities should be continuously available.

The second point is more nearly a caution about our expectations for motivating all students in all areas of general exploratory activity. It is unrealistic to expect that more than a few youngsters (or perhaps even a single youngster) will become sufficiently motivated to want to further pursue a particular topic or area as a Type III Enrichment activity. One of our popular criticisms of the regular curriculum is that all students are somehow expected to be interested in whatever is dished at them, and it is this faulty assumption that undoubtedly makes schools such dreary places for many youngsters. We should not fall into the same trap by expecting universal enthusiasm from any single exploratory experience. In fact, it is a good idea to keep in mind that sustained interest in a particular topic is the exception rather than the rule. For example, many students may find history to be a dull subject but for the one or two who really get turned on in this area, it will hold all the magic and romance that causes adult historians to devote their life to this subject. Even the most imaginatively developed exploratory activities may be dull to some students, and it is for this reason that a wide variety of alternative exploratory experiences should be provided.

---

*Editor's Note: This is the end of the first section of this article. The second section which discusses type II and III enrichment will appear in a subsequent issue.*

A THREE STAGE MODEL FOR ENRICHMENT  
ACTIVITIES

J. FELDHUSEN

STAGE I

Divergent and Convergent Thinking Abilities

INSTRUCTIONAL ACTIVITIES

- 1
- \*creative thinking exercises
  - \*short span activities
  - \*variety of exercises emphasizing fluency, flexibility, originality, & elaboration
  - \*teacher leads

EXAMPLES OF RESOURCES

- \*"New Directions in Creativity Mark I, II, III"(Renzulli & Callahan, 1973)
- \*"Basic Thinking Skills" (Harnadek, 1976)
- \*Project REACH (Wandell & Foss, 1975)
- \*"Purdue Creative Thinking Program" (Feldhusen, Treffinger, & Bahlke, 1970)

STAGE II

Creative Thinking and Problem Solving Strategies

- 2
- 2
- \*creative problem solving, brainstorming
  - \*inquiry, synectics, forced relationships
  - \*teacher leads but students take more initiative

- \*"Productive Thinking Program" (Covington, Crutchfield, Davies, Olton, 1966)
- \*"Think-Ins" (Kaplan & Madsen, 1974)
- \*"Ideabooks"(Myers & Torrance, 1965)

STAGE III

INDEPENDENT LEARNING ABILITIES

- 3
- 3
- 3
- \*based on student's own interests
  - \*work individually or in small groups
  - \*realistic goals with some end product
  - \*students take lead, teacher aids or serves as resource person

- \*"Big Book of Independent Study" (Kaplan, Masden, & Gould, 1976)
- \*Interest-A-Lyzer (Renzulli, 1977)
- \*"Guide to Creative Action"(Parnes, Noller, & Biondi, (1976)

Taken from: Feldhusen and Rolloff, G/C/T, Sept/Oct., 1978

A Three-Stage Model  
For Gifted Education

John F. Feldhusen and Margaret B. Kolloff  
Purdue University

Gifted education often seems to consist chiefly of attractive and exciting enrichment activities designed to "turn" gifted children "on" and make parents feel that something worthwhile is happening. Rarely do gifted programs have an explicit rationale or theoretical base, much less specific instructional objectives. Yet it seems that if programs for the gifted are to grow and become established in the curriculum, they should be systematically designed and theoretically defensible.

Models for Instruction

Renzulli (1977) offered a triad model which is an exception to the negative assertions above. It is a systematic plan for developing gifted programs. Three types of instructional activity characterize the model: 1) general exploratory experiences which permit a child to clarify his/her own interest and abilities, 2) group learning activities which help gifted children learn how to work more effectively with content, and 3) individual and small group projects. At the third level, gifted students use the methods of inquiry of scholars and professionals in dealing with "real life" problems.

In contrast with the enrichment model advocated by Renzulli, Stanley (1977) urges acceleration for the gifted. Beginning with the assumption that there is a small number of children who are prodigiously gifted by virtue of having advanced knowledge and ability in one or more of the subject matter areas, Stanley (1977) proposes an acceleration model for gifted youngsters in mathematics and science. His program, The Study of Mathematically Precocious Youth (SMPY), emphasizes intensive achievement testing in subject matter skill for youth who display some initial precocity. When the testing verifies the presence of high level achievement, various forms of acceleration are offered to bring the gifted child quickly into contact with an appropriate level and challenge of instruction. During the eight years of the project, Stanley and his colleagues have demonstrated the feasibility and desirability of such acceleration for highly gifted students in mathematics and more recently in science.

Our own experience in working with schools in developing programs for the gifted suggests that an ideal program would combine enrichment and acceleration to meet the needs of gifted youth. Children for whom an acceleration program would be appropriate are significantly advanced in areas such as mathematics,

science, language arts, or social studies as reflected in standardized achievement test performance and parent and teacher observation. These are children whose achievement test performance places them above the 90th percentile in one or more areas. Their IQs are likely to be above 140. For these gifted students, the appropriate method would be to use further testing to verify their advanced status and to develop instructional methods which will advance them to a more appropriate and challenging level. Stanley documented (1977) the problem of leaving these children to languish in average instructional settings. Much of their time is wasted on repetitive homework assignments. The best educational environment for them is a homogeneous classroom group, paced by a teacher, with appropriate advanced subject matter.

Getzels and Dillon (1973) listed numerous ways of providing for these highly gifted children. They include grade skipping, compressing two grades into one year, taking high school courses while in junior high, taking college courses while in high school, and early admission to college. The most suitable approach is to open advanced level courses to these students. However, in larger cities special Saturday morning or evening classes or seminars have been organized for small groups of these gifted students, often on a college campus. Stanley also described an approach (1977) in which slightly older and more advanced gifted students tutor somewhat younger gifted students in basic subject areas.

While many teachers and school administrators seem to resist this acceleration approach (Instructor Magazine, May, 1977), there is no systematic evidence showing it to be harmful and much positive evidence to show that it is feasible and productive. Teachers often question the social maturity of gifted youth and fear that they will experience adjustment problems in an accelerated group. However, it appears that most gifted students adjust socially to new situations with great ease.

The current widespread enthusiasm for enrichment programs might serve the negative purpose of blinding educators to the need for acceleration for highly gifted children. While such programs might serve some of the needs of less gifted, creative and talented children, they will fail to meet the needs of the highly gifted who are at advanced achievement levels in one or more subject matter areas.

### The Three-Stage Enrichment Model

We turn now to the gifted youngsters who need enrichment rather than acceleration. These are youngsters whose achievement levels are more modest (60%ile-80%ile), whose IQs may be in the range 110-140, and who may have creative or expressive talents and abilities. Their major needs may be satisfied in an enrichment program.

Feldhusen, Linden, and Ames (1975) and Feldhusen, Hynes, and Richardson (1977) have developed a new model of instruction which emphasizes higher level cognitive learning, professional application, and individualized learning. The model has been used successfully at the high school level and in undergraduate and graduate level college courses.

Drawing on the work of Renzulli, Stanley, and our own model for course design, we have developed a new model for gifted education which we have been trying out in several schools. The model holds promise as a rationale for the design of gifted programs at the elementary and secondary levels.

Our three-stage enrichment model begins with the following set of guidelines:

1. There should be a systematic program of identification of gifted, creative, and talented children with primary inputs from standardized achievement tests and teacher observations.
2. The gifted students should be organized into small groups which meet at least twice a week for guidance and enrichment activities.
3. Instructional objectives should be formulated and used as guides in planning all activities.
4. The activities should be intellectually stimulating and challenging.
5. A portion of these activities should be directed toward the development of independent study and learning skills.
6. There should be much stress on challenging reading and discussion.

These programs can be organized in a variety of ways. A classroom teacher may conduct such a program for two or more gifted children in his/her own classroom. The several teachers at a grade level may work together with one serving as resource teacher for all the gifted at a grade level. An outside resource teacher also affords an excellent opportunity to provide for these children, if such a person is available. Often the librarian can serve in this resource role.

Our three-stage model proposes three levels of instructional activity as shown in Figure 1. They may all be used intermittently, but there should be increasing emphasis on the higher levels. Stage one activity is concerned with the development of basic divergent and convergent cognitive abilities. At this stage there is much emphasis on relatively short activities selected and directed by the teacher. The exercises from New Directions in Creativity by Renzulli and Callahan (1973) are examples of basic skill building activities as are the activities in the Purdue Creative Thinking Program (Feldhusen, Treffinger, Bahlke, 1970). In the realm of logical thinking are the Basic Thinking Skills series by Harnadek (1977) and Critical Thinking by Harnadek (1976). Project REACH, directed by Joyce Juntune at Pike Lake School, 2101 14th Street, N.W., New Brighton, Minnesota has also published some excellent handbooks of creative

enrichment activities which are excellent for use with gifted children (Wandell & Foss, 1975).

Stage one activities must be carefully selected with objectives in mind and wisely used to assure suitable challenges for gifted youngsters. Otherwise they become only fun and excitement without clear educational relevance. Feldhusen and Treffinger (1977) examined a wide variety of these materials and published information about them in their book Teaching Creative Thinking and Problem Solving.

Stage two of the model calls for more complex creative and problem solving activities which require increased initiative from students and less teacher control. The Productive Thinking Program by Covington, Crutchfield, Davies, and Olton (1966), Think-Ins by Kaplan and Masden (1974), Imagination Express by Davis and DiPego (1973) and the simulation games developed by Sisk (1975) are all excellent illustrations of the activities appropriate to stage two. The Creative Problem Solving model developed by Noller in Scratching The Surface of Creative Problem Solving (1977) is also a useful guide for stage two activities. It stresses an orderly progression through creative, convergent and evaluative sented in Figure 2. We urge teachers to go into stage two activities while continuing to use some stage one activities.

When the teacher has developed a good working relationship with the group, when the students show proficiency at stage two activities and skills, and when their reading has highlighted their special interests, they are ready to move into stage three activities. In stage three the students work on challenging independent research projects. As a prelude to stage three activity, a student interest analysis is appropriate. Renzulli (1977) offers the Interest-A-Lyzer which provides detailed information about a student's background interests and abilities. Stage three activities can be carried out individually and in small groups. The teacher may obtain assistance in generating and clarifying student interests in stage three activities with the Big Book of Independent Study by Kaplan, Masden, and Gould (1976). These materials guide individual learners through the process of independent research, from topic selection through record keeping and evaluation. A number of topics are provided for the students, but the principles and procedures are applicable to any independent study.

Stage three projects should involve gifted youngsters in challenging efforts to define and clarify a problem, ambitious data gathering from books and other resources, interpretation of findings, and the development of creative ways of communicating results. There is danger that stage three activities lose challenge and become busy project activities. The essence of stage three activities should be cognitive. Guidance by the teacher is needed to assure this end. Figure 3 gives a list of typical stage 3 activities.

The creative problem solving model pioneered by Parnes, Noller, and Biondi (1976) in their Guide to Creative Action can serve as a guiding system for stage three activities. It stresses creativity and systematic problem solving. The model has been used effectively with groups ranging from young children through adults.

#### The Triad versus The Three-Stage Model

Our three-stage model is similar to Renzulli's triad model in several respects and different in others. Renzulli stresses exploration of interests and "turn on" activities in stage one, whereas we accent the development of basic abilities in the beginning activities. Renzulli's stage two is analogous to our stage one in emphasizing the development of basic process abilities. Our stage two focuses on the development of intermediate independent study and problem solving abilities. In stage three Renzulli seeks quite dramatically high independent project and inquiry activities. Illustrations include preparation of and lobbying for legislation and publication of research articles and books. We stress simpler independent study with much focus on reading, information gathering, interpretation of material, and creative reporting of results.

#### Goals and Objectives

It has been stressed that goals and objectives should be formulated and used as guides for activities in all three stages of the model. Figure 4 presents a set of broad goals for a gifted program. They are not meant to be definitive, and they might be revised or changed completely to suit local needs and conditions.

Figure 5 presents a set of cognitive objectives which are appropriate for the three-stage model described in this paper. Note that the progression is from objectives which correlate with stage one activities through objectives 10 and 11 which emphasize independent, self directed learning activities.

Figure 6 presents a set of process-oriented affective and social objectives. These objectives also call for careful program planning to assure appropriate learning activities. The first one, "Work with other students..." is obviously realized in the small group, organized activities. Number 4 calls for special values clarification activities. Numbers 2,3, and 5 call for the teacher to make efforts to assure that program activities are carried out successfully by students and that the activities are challenging, stimulating, and interesting.

#### Summary

The three-stage model for gifted education proposes a hierarchical progression of enrichment activities developed on a foundation of cognitive and affective objectives. The gifted student, working within this model, becomes an increasingly self-directed, independent learner. The activities in the three-stage model are designed to develop the skills of productive thinking, problem solving, independent research and project planning.

The three-stage model is appropriate to the needs of the gifted student and the various organizational patterns of school settings. The model can be implemented by a classroom teacher for a single classroom or grade level grouping. In this manner, the gifted student will be provided for within the total school program.

## References

- Covington, M., Crutchfield, R., Davies, L., & Olton, R. Productive Thinking Program. Columbus, Ohio: Charles E. Merrill, 1966.
- Davis, G., & DePago, G. Imagination Express: Saturday Subway Ride. Buffalo, New York: D.O.K. Publishers, 1973.
- Feldhusen, J.F., Hynes, K.P., & Richardson, W.D. Curriculum materials for vocational organizations: An innovative approach. Clearing House, 1977, 50, 224-226.
- Feldhusen, J.F., Linden, K.W., & Ames, R.E. Using instructional theory and educational technology in designing college courses. In Improving College and University Teaching Yearbook, 1975. Corvallis, Oregon: Oregon State University Press, 1975, 64-69.
- Feldhusen, J.F., & Treffinger, D.J. Teaching Creative Thinking and Problem Solving. Dubuque, Iowa: Kendall/Hunt, 1977.
- Feldhusen, J.F., Treffinger, D.J., & Bahlke, S.J. Developing creative thinking: The Purdue Creativity Program. Journal of Creative Behavior, 1970, 4, 85-90.
- Getzels, J.W., & Dillon, J.T. The nature of giftedness and the education of the gifted. In R.M.W. Travers (Ed.) Second Handbook of Research on Teaching, Chicago: Rand McNally, 1973, 689-731.
- Harnadek, A. Critical Thinking. Troy, Michigan: Midwest Publications, 1976.
- Harnadek, A. Basic Thinking Skills. Troy, Michigan: Midwest Publications, 1977.
- Instructor Magazine. Do you have to be gifted to teach the gifted? Preliminary results, 1977, 86(9), P. 20.
- Kaplan, S., & Madsen, S. Think-Ins. Monterey, California: Creative Teaching Press, 1974.
- Kaplan, S., Madsen, S., & Gould, B. The Big Book of Independent Study. Pacific Palisades, California: Goodyear Publishing Company, 1976.
- Myers, R.E., & Torrance, E.P. Ideabooks. New York: Ginn and Company, 1965.
- Noller, R.B. Scratching the Surface of Creative Problem-Solving. Buffalo, N.Y.: D.O.K. Publishers, 1977.
- Parnes, S.J., Noller, R.B., & Biondi, A.M. Guide to Creative Action. New York: Scribner's, 1976.
- Renzulli, J.S. The Enrichment Triad Model. Wethersfield, Conn.: Creative Learning Press, 1977.

Renzulli, J.S., & Callahan, M. New Directions in Creativity. Evanston, Illinois: Harper and Row Publishers, 1973.

Sisk, D. Simulation: Learning by doing revisited. Gifted Child Quarterly, 1975, 19(2), 175-180.

Stanley, J.C. Rationale of the study of mathematically precocious youth (SMFY) during its first five years of promoting educational acceleration. In J.C. Stanley, W.C. George, & C.H. Solano (Eds.) The Gifted and the Creative, a Fifty-Year Perspective. Baltimore, Maryland: Johns Hopkins University Press, 1977.

Wandell, M.S., & Foss, K.J. Reach In Action. New Brighton, MN: Pike Lake School, 2101 14th St., NW, 1975.

#### Figure 5

#### Cognitive Objectives

The Gifted students will:

1. Produce multiple ideas for various cognitive tasks (Fluency) (Stage I).
2. Think of a wide range of ideas for differing tasks (Flexibility) (Stage I).
3. Be original and create relatively unique or innovative ideas (Originality) (Stage I).
4. Develop basic ideas and fill in interesting and relevant details (Elaboration) (Stage I).
5. Ask questions which clarify puzzling and ambiguous situations (Stage I).
6. Use effective techniques in solving closed (single solution) and open (multiple solutions) problems (Stage I).
7. Synthesize ideas in independent and small group creative project activities (Stage III).
8. Evaluate alternative ideas or solutions in problem situations (Stage II).
9. Sense and clarify problems in a variety of situations (Stage II).
10. Exercise self motivation, direction, and independence in learning and project activities (Stage III).
11. Carry out an independent program of free reading at a challenging level appropriate to the level of reading skill (Stage III).
12. Use language effectively in speaking and writing (Stages I, II, III).

Figure 1

## A Three-Stage Model for Enrichment Activities

| Stage I   | Developing Divergent & Convergent Thinking Abilities   | Examples of Resources  |
|-----------|--|--|
|           | <ul style="list-style-type: none"> <li>*creative thinking exercises</li> <li>*short span activities</li> <li>*variety of exercises emphasizing fluency, flexibility, originality, &amp; elaboration</li> <li>*teacher leads</li> </ul>                     | <u>New Directions in Creativity</u><br>Mark I, II, III (Renzulli, & Callahan, 1973)<br><u>Basic Thinking Skills</u> (Harnadek, 1976)<br>Project REACH (Wandell & Foss, 1975)<br><u>Purdue Creative Thinking Program</u><br>(Feldhusen, Treffinger, & Bahlke, 1970) |
| Stage II  | Developing Creative Thinking & Problem Solving Strategies  |  |
|           | <ul style="list-style-type: none"> <li>*creative problem solving, brainstorming</li> <li>*inquiry, synectics, forced relationships</li> <li>*teacher leads but students take more initiative</li> </ul>  | <u>Productive Thinking Program</u><br>(Covington, Crutchfield, Davies, Olton, 1966)<br><u>Think-Ins</u> (Kaplan & Madson, 1974)<br><u>Ideabooks</u> (Myers & Torrance, 1965)   |
| Stage III | Developing Independent Learning Abilities  |  |
|           | <ul style="list-style-type: none"> <li>*based on students' own interests</li> <li>*work individually or in small groups</li> <li>*realistic goals with some end product</li> <li>*students take lead, teacher aids or serves as resource person</li> </ul> | <u>Big Book of Independent Study</u><br>(Kaplan, Masden, & Gould, 1976)<br>Interest-A-Lyzer (Renzulli, 1977)<br><u>Guide to Creative Action</u><br>(Parnes, Noller, & Biondi, 1976)  |

## Figure 2

### Creative Problem Solving

#### Processes

#### I. Problem Generation

Fluency  
Flexibility  
Originality  
Deferred  
Judgment

- A. What are the problems children have on the playground.  
Brainstorm problem identification.

Evaluation

- B. What are the most critical and general?  
Pick 3, then 1

#### II. Problem Clarification

Analysis  
Evaluation

- A. What are illustrations of the problem?  
B. What are things that cause the problem?  
C. What are further problems caused by the problem?

#### III. Problem Identification

Synthesis

- A. Restate the problem after stage II discussion.

#### IV. Idea Finding

Fluency  
Flexibility  
Analysis  
Originality  
Defer Judging

- A. What could we use?  
B. What could we do?  
C. Use creative thinking techniques  
    1) forced association  
    2) synectics  
    3) attribute listing  
    4) idea spurring

#### V. Finding A Solution

Syntheses  
Elaboration  
Evaluation

- A. Pick out the best elements from stage IV.  
B. Put together a solution.  
C. Does it fit the problem?

#### VI. Putting The Solution To Work

Synthesis  
Evaluation  
Originality  
Flexibility

- A. Who will do what?  
B. How?  
C. When?  
D. Where?  
E. What should we watch for?  
F. How can we convince others?

Figure 3  
Stage 3 Projects

- I. A gifted child writes a series of Haiku poems.
- II. A gifted child writes a short story.
- III. Five gifted children write a script and produce a short play.
- IV. Four gifted children plan and conduct a survey on teachers' and students' attitudes toward energy conservation and write a report based on their findings.
- V. Five gifted children write and videotape a series of skits on TV commercials.
- VI. Two gifted boys do research on drilling for oil in the ocean and develop a model of a drilling platform.
- VII. Several gifted students plan a city of the future and make a model design of the city.
- VIII. Three gifted students who are interested in photography take a series of pictures of historical homes and prepare a show of the pictures.
- IX. Several gifted students do research and prepare a report on air pollution problems in the city.
- X. Four gifted children in 6th grade study early transportation and present a report with slides to second graders.
- XI. A group of gifted 5th graders investigate alternate systems of waste disposal and present their results to the city council.
- XII. A group of gifted 6th graders plan a 10-minute weekly news program, write the script and broadcast over the school PA system.
- XIII. Several gifted 4th graders study early history of theaters in the community and present their results with slides to the historical society.
- XIV. A group of gifted 3rd graders study numerals and prepare a display for the school library.
- XV. Gifted 5th graders research backgrounds of community leaders, write biographical scripts, and present stories on local radio.
- XVI. Gifted 8th graders do weekly story hour for primary grades with slide illustrations.

Figure 4  
Broad Goals of Programs for the Gifted

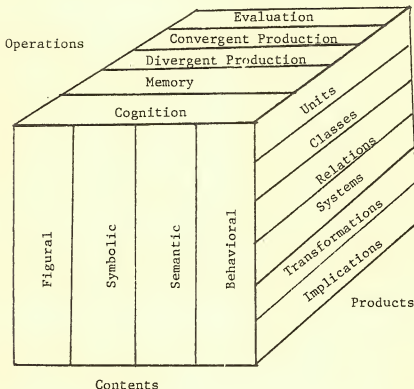
1. Develop gifted students' basic thinking abilities.
2. Help gifted students develop more adequate self concepts by providing small group interaction with other gifted children.
3. Help gifted students develop their intellectual and creative abilities through challenging instructional activities.
4. Help gifted students become more independent and effective as learners.

Figure 5  
Affective and Social Objectives

The gifted students will:

1. Work with other students of similar ability in project activities.
2. View themselves as competent and effective learners.
3. Respond positively to various types of cognitive activities (favorable attitudes toward creative thinking, problem solving and cognitive project activities).
4. Clarify their own values-systems through valuing strategies related to the learning activities.
5. View themselves as competent creative thinkers, problem solvers, and independent learners.

# GUILFORD'S STRUCTURE-OF-INTELLECT MODEL



The above figure is J. P. Guilford's Structure-of-Intellect Model, (SI Model) within which each little cube represents a unique combination of one kind of operation, one kind of content, and one kind of product, hence a distinctly different intellectual ability or function.

Although the model illustrates the existence of distinct factors, Guilford felt that these factors fell into three classifications: operations, contents, and products.

The first classification, OPERATIONS, is according to the basic kind of process or operation performed. There are, according to Guilford's model, five major groups of intellectual abilities: factors of cognition, memory, convergent thinking, divergent thinking and evaluation. Since the units included in this section are based mainly on the operations of this model, these are more fully defined below:

Cognition: includes understanding, discovery, rediscovery, awareness and comprehension.

Memory: Retention and recall of knowledge in the form in which it is used.

Convergent thinking: Use information to generate a single, correct or best answer; unique at least to the individual who produced it.

Divergent thinking: Imaginative, spontaneous, fluent self-expression.

Evaluation: Regular of all other operations; make judgments based on some criterion or set of criteria.

The intellectual factors are further classified by the kind of material or CONTENT involved and these four factors are: figural, symbolic, semantic and behavioral. The third classification of factors results when an operation is applied to a certain kind of content. The six kinds of PRODUCTS resulting are: units, classes, relations, systems, transformations and implications.

#### Structure of Intellect Institute

Dr. Mary Meeker of the SOI Institute in El Segundo, California, has designed an instructional model around Guilford's model. The program involves testing for the intellectual factors of the model and prescribing curriculum around the strengths and weaknesses of the student.

## \*SUMMARY OF PIAGET MODEL

### BASIC STAGES

### BEHAVIOR

#### SENSORIMOTOR STAGE

(0-2 YEARS)

UNDERSTANDING THE  
PRESENT AND REAL

COMPOSED OF SIX SUBSTAGES THAT MOVE  
INTENTIONAL ACTIVITY INVOLVING CAUSE-  
EFFECT BEHAVIOR.  
INVOLVES DIRECT INTERACTIONS WITH THE  
ENVIRONMENT.

#### PREOPERATIONAL STAGE

(2-7 YEARS)

SYMBOLIC REPRESENTATION  
OF THE PRESENT AND REAL

PREPARATION FOR UNDER-  
STANDING CONCRETE  
OPERATIONS.

CHILD USES SIGNIFIERS: MENTAL IMAGES  
IMITATION, SYMBOLIC PLAY, DRAWING,  
LANGUAGE  
UNDERSTANDS VERBAL COMMUNICATION

BELIEVES WHAT HE SEES - IS "LOCKED  
INTO" THE PERCEPTUAL WORLD. SEES  
THINGS FROM HIS OWN POINT OF VIEW  
AND ONLY ONE WAY AT A TIME ("CENTERING")

THINKING IS NOT REVERSIBLE

BUSY LAYING FOUNDATIONS FOR UNDERSTANDING  
CONCRETE OPERATIONS STAGE, WHICH IN-  
VOLVES GRASPING CONCEPTS OF CONSERVATION,  
TRANSITIVITY, CLASSIFICATION, SERIATION,  
AND REVERSIBILITY

#### CONCRETE OPERATIONS

(7-11 YEARS)

ORGANIZATION OF  
CONCRETE OPERATIONS

HAS PROBABLY ACQUIRED THE FOLLOWING  
CONCEPTS: CONSERVATION, REVERSIBILITY,  
TRANSITIVITY, SERIATION, AND CLASS-  
IFICATION; THAT IS, NOW BELIEVES THAT  
LENGTH, MASS, WEIGHT, AND NUMBER  
REMAIN CONSTANT; UNDERSTANDS RELATIONAL  
TERMS SUCH AS "LARGER THAN" AND "SMALLER  
THAN"; IS ABLE TO ARRANGE ITEMS  
IN ORDER FROM GREATEST AMOUNT TO  
LEAST AMOUNT; CAN GROUP THINGS ACCORD-  
ING TO MORE THAN ONE PRINCIPLE.

#### FORMAL OPERATIONS

(11-15 YEARS)

HYPOTHESIS MAKING  
TESTING THE POSSIBLE

AGE OF ABSTRACT THINKING

ABLE TO CONSIDER ALTERNATIVE POSSIBILITIES  
AND SOLUTIONS.  
CAN CONSIDER "FANCIFUL," HYPOTHETICAL  
POSSIBILITIES AS A BASIS FOR  
THEORETICAL PROBLEM SOLVING.

OPERATIONAL OPERATIONAL OPERATIONAL



# PROGRAM EVALUATION



VII



# Evaluating a Local Gifted Program: A Cooperative Effort

CAROLYN M. CALLAHAN  
ROBERT COVERT  
MARTIN S. AYLESWORTH  
PEGGY VANCO

*Abstract: Evaluations of programs for the gifted have been criticized because of lack of objectivity and have often been perceived as a threat to programs rather than as an aid to program improvement. In an effort to overcome these criticisms, a university evaluation team and a public school program worked to develop evaluation instruments and procedures. The experiences of the first year of this cooperative effort are presented here to illustrate the issues, problems, and benefits of such an arrangement.*

CAROLYN M. CALLAHAN is Associate Professor and MARTIN S. AYLESWORTH is Research Assistant, Department of Foundations; ROBERT COVERT is Associate Professor and PEGGY VANCO is Research Assistant, Department of Research and Evaluation, School of Education, University of Virginia, Charlottesville.

Exceptional Children

■ Practitioners in the field of education often lament the inability of academicians to communicate and work with them on solutions to immediate real-life problems. In turn, academicians question the impact of their research and evaluation efforts on school problems (Kerlinger, 1977). In particular, the field of evaluation has often been criticized for not providing relevant, useful information to program decision makers (Cox, 1977). In spite of the introduction of the concept of formative evaluation and expanded efforts to involve evaluators in program descriptions, such as the Discrepancy Evaluation Model prescribed by Provas (1971), many evaluation efforts are still perceived as mandatory, perfunctory means of satisfying a federal grant requirement or a school board's accountability demands.

Evaluation, furthermore, is often perceived as a judgmental process and a threat to programs rather than as an aid to program improvement. It is, therefore, unusual to see an existing, locally funded program actively seek funds for evaluation efforts. One of the unusual characteristics of the project described here is the commitment to evaluation by the program under scrutiny. This Midwestern suburban school system, serving a community of primarily blue collar and professional workers, had begun a locally funded program for academically gifted students one year prior to applying for evaluation money through Title IV-C. The existing program served approximately 120 academically gifted students, from a total population of 1600 students in grades 5-8, through an enrichment center model. Students were transported from the elementary and mid-

---

Exceptional Children, Volume 48, Number 2. Copyright © 1981 The Council for Exceptional Children.

dle schools to an enrichment center site. Realizing its own financial and professional limitations in carrying out program evaluation, the school system applied for Title IV-C funding specifically to develop appropriate instrumentation and to develop and implement a complete evaluation plan. The Title IV-C grant was approved by the state and included funds for the development of a fine arts program as an expansion of the existing program for the intellectually gifted. The primary focus of the project was the development and implementation of an evaluation plan for the district's program for gifted students.

The local school program realized that outside assistance would be needed to implement an effective evaluation plan involving test development and evaluation design. A university was considered the best source of assistance because of staff expertise in both evaluation and education for gifted students. By applying for Title IV-C funds, the school program was able to realize the goals of immediate help for assessing and improving their own program, and long range benefits for themselves and other programs from the development of standardized instruments and procedures. RFP's requesting a proposal to meet the prescribed criteria of the proposal were forwarded to universities that were identified by the school system as having expertise in both of the areas mentioned.

## BACKGROUND

Evaluations of gifted and talented programs have been criticized for (a) over-reliance on attitudinal data for assessing program worth, (b) use of inappropriate (invalid) tests for assessing student achievement, and (c) lack of careful documentation and evaluation of the actual curriculum implemented in a program.

One impetus for the original proposal was the lack of standardized instruments to assess the goals and objectives specified by the program (primarily in the areas of analysis, synthesis, and evaluation skills) for the grade levels (5-8) involved in programs for intellectually gifted students. Although the Ross Test of Higher Cognitive Processes (Ross & Ross, 1976) had been used to assess achievement, the ceiling was found to be too low for students in the upper grade levels. The scope of skills assessed by the Watson-Glaser Critical Thinking Ap-

praisal (Watson & Glaser, 1964) was considered too narrow, as were the Torrance Tests of Creative Thinking (Torrance, 1974). A second impetus for seeking funds was a desire to collect valid and reliable evaluation data for a small school system lacking a staff with expertise in evaluation and the funds to hire external evaluators.

## THE EVALUATION TEAM

In the initial planning of the evaluation, it became evident that this project would require expertise from a number of different specialty areas, such as program evaluation, measurement, and content. As many evaluators have pointed out, the content area specialists and research/evaluation specialists each contribute more to effective research and evaluation efforts when working cooperatively than when working individually (Provus, 1971). Because the project called for test development, program evaluation, and curriculum evaluation as well as curriculum validation, it was determined that specialists in the areas of measurement, evaluation, curriculum, and education of the gifted and talented should be included on the staff. The final evaluation team included one faculty member from the Evaluation Research Center, one faculty member from Foundations of Education (area of Gifted and Talented), and three graduate students drawn from the Department of Foundations and the Department of Research and Evaluation.

## THE PLANNING GRANT

Initial funding for the program was a small planning grant awarded for the summer of 1979. The most immediate concerns of this grant were the development of a plan for evaluation and a draft of a specific instrument to be used in assessing student achievement in the program for intellectually gifted students. First, the staff examined the program proposal, the stated goals and objectives of the program, and existing curriculum documents (primarily mimeographed activity sheets). Then the staff reviewed existing tests of the skills described, reviewed the *Taxonomy of Educational Objectives: Handbook I: Cognitive Domain* (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956) and other existing instruments, and from these sources developed a list of the specific competencies to

#### Analysis

- a. To define a problem.
- b. To distinguish relevant from irrelevant information.
- c. To recognize stated and unstated assumptions.
- d. To select relevant hypotheses.
- e. To distinguish conclusions from supporting statements.
- f. To recognize ambiguity and contradiction.
- g. To recognize basic terms and interrelations.
- h. To identify motive, point of view, and bias.
- i. To recognize sequential relationships.

#### Synthesis

- l. To generate information to solve a problem.
- m. To formulate and modify hypotheses.
- n. To make valid implications based on information.
- o. To devise a set of abstract relationships.
- p. To organize a set of ideas.
- q. To formulate logical experiments.
- r. To adapt materials to different situation (analogy as a special case).

#### Evaluation

- u. To identify appropriate criteria for evaluation.
- v. To make judgments based on comparisons with criteria.
- w. To detect fallacious reasoning.
- x. To judge whether information is reliable and valid.
- y. To separate rational from emotional reasoning.

**FIGURE 1. Test objectives for cognitive assessment instrument.**

be assessed. (See Figure 1.) An item generation phase followed. During this period, an attempt was made to generate both verbal and nonverbal items, and supply and selection items (as the objectives suggested). By early fall, a pool of items was available for pretesting.

A second task undertaken by the project staff was a description of the existing program for intellectually gifted students and a description of the evolving program for students gifted in the fine and performing arts. Using the conventions of the Discrepancy Evaluation Model, a program description was developed and presented to the gifted and talented program staff. The development of this program description and discussion of the components with administrative officials and staff pointed to several program concerns which had not been identified earlier. The most significant observation was the lack of clearly identified program management responsibility. Although the administrative assistant to the district superintendent had "legal" responsibility at the local level and was designated as the project director, the person most responsible for program development and administration was a teacher from the academic program. Specific proposals for modification of this administra-

tive arrangement were made to the central administrative staff.

Finally, a proposal for a 3-year project was drawn and submitted to the school division for approval.

### THE PROPOSAL FOR EVALUATION

The original project proposal called for the development and implementation of an evaluation design, the development of assessment instruments, and the development of a plan for reporting student achievement.

As a result of the work of project staff over the summer months, it was determined that the tasks of evaluation and program documentation would be of limited use without the additional process of curriculum documentation. Thus, additional components relating to the development of a curriculum framework were added to the proposed tasks of the team.

#### Documentation of Academic Curriculum Development

Work on curriculum development by the evaluation staff began with a review of the curriculum materials provided by the local program

staff. In this review the following problems (not uncommon to many gifted programs) were identified:

1. The units appeared to lack any clear rationale for selecting or sequencing activities.
2. The activities were exceedingly brief and generally fairly simple considering the ability level of students in the program.
3. There seemed to be no sequence to the activities—any one could have followed any other; thus there was little attempt to build and develop skills or concepts.
4. There were no clear content or skill objectives stated or implied.
5. The curriculum materials were hard to understand.

Because of these problems the first meeting regarding the academic curriculum had the following purposes:

1. To agree on a format that would communicate curricular activities and objectives.
2. To identify specific program goals.
3. To identify general organization for instruction within which the developed curriculum would fit.
4. To develop a rationale for selection of content.
5. To develop a rationale for selection of skills.
6. To point out the importance of sequence and a variety of ways it could be accomplished.

Toward these ends the evaluation staff:

1. Constructed and reviewed the results of a questionnaire assessing familiarity and attitude of the program staff toward certain basic curriculum concepts. Results suggested that the problems identified in the curriculum review were due to a lack of skills in implementing or communicating concepts rather than a lack of familiarity with them.
2. Presented the program staff with some options available in planning for scope and sequence across the four grades of the program; from these options the program staff elected to develop 24 content units and use 6 per year so that all four grades would be using the same unit with no repetition of units for students across four years in the program.
3. Presented an example of a curriculum documentation format based on one of the pre-

viously developed units which would identify the major elements of the units and activities. Revisions were made on the format presented based on program staff suggestions.

4. Discussed program rationale, goals, and general organization for instruction with the program staff.
5. Discussed criteria for assessing objectives, resources, and activities with the program staff.

Curricular materials which were developed following the initial meeting suggested that the only fact communicated had been how to document activities. The following major problems faced the evaluation team:

1. Activities were connected to goals in only the loosest sense; objectives listed for activities were rarely curricular objectives.
2. Activities selected were not sequenced to allow for skill development.
3. Activities were not of a type that would allow for multiple levels of inquiry as made necessary by the choice to use the same unit content for all students in the program.
4. Activities were brief and well below the abilities of the majority of students.

The evaluation staff constructed a sample unit based on the guidelines developed at the initial meeting to point out how these problems could be overcome. A topic quite different from those the program had selected was used as an example. In a second meeting with the program staff:

1. The curriculum problems were identified.
2. The sample unit was presented showing how these problems could be overcome.
3. A member of the evaluation staff worked with the program staff to develop a unit on a topic to be implemented in the future.

During this process, the evaluation staff noted a great dependence on the materials resources of the program as a source of simple activities. Accordingly, a unit was developed to show how the resources of the program and community could be used as resources for activities more appropriate to the students in the program.

#### Documentation of the Fine Arts Program

Efforts to work with the visual arts and dramatics programs on documenting their curric-

ulum began with a review of such programs in the existing literature. Finding little to guide the process, the staff began to create a structure which seemed both efficient and effective in communicating and organizing the activities of these classes.

During the initial visit with the program staff, the following activities took place:

1. The need for curriculum documentation for evaluation purposes was discussed.
2. The evaluation staff presented a structure for organizing goals, objectives, and activities into a curricular framework and a format for collecting information was agreed upon (see Figure 2).
3. The combined staffs discussed the appropriateness of the stated program goals.
4. Agreement was reached that the staff would forward activity cards or lesson plans as completed.

As only two activity cards were forwarded during the next 2 months, it was determined that alternative strategies for collecting the information were needed.

A second on-site visit produced the activity cards for the drama program and allowed for a beginning of the curriculum design process. The art program staff agreed to be more prompt in the future but another period of 2 months elapsed with no further documentation. As a result, it was proposed that slides and tapes of actual

classroom activities be produced and forwarded to the evaluation team. That process has been the most effective means of eliciting the documentation sought by the evaluation staff.

## DISCUSSION

### Team Approach to Evaluation

The team approach to evaluation (using both evaluation and content specialists) has resulted in some of the anticipated, positive results. However, it has also presented at least one unexpected issue. Early in the process of program description and review of the program's existing curriculum, it became apparent that the existing curriculum fell short of meeting generally accepted criteria for curriculum design. Therefore, persons on the team with expertise in the area of curriculum or education of the gifted and talented were faced with a dilemma centering on the conflict between the evaluator role and the curriculum consultant role. Rather than interpreting this circumstance as a difficulty, we approached it as a plus for the team. Those persons with curriculum expertise intervened by providing consultation on improving the curriculum while allowing the others to maintain more of an objective posture toward the data being collected.

|  |   |  |
|--|---|--|
| Unit: Reader's Theater and Voice   | Level: All  | Date: Week of Jan. 21                                  |
| Focus: Individual Interpretations  |   |  |
| Objectives   | Activity  | Resources  |
| 1. Develop technical & expressive vocal skills   | Teacher: Provides collection of appropriate material. Provides guidance in selection of material & alternative interpretations. | Printed materials                                      |
| 2. Analyze and interpret various forms of literature   | Student: Selects material. Prepares and presents oral interpretation.   | Reproduction   |
| Preceding activities: Vocal exercises<br>Following activities: Reader's theater<br>Comments: |   | Time: 15 min. each day<br>for 4 days, 1 hr. fifth day. |

FIGURE 2. Sample activity card for fine arts.

### Evaluators and School as a Team

Reluctance to be evaluated is not surprising, human nature being what it is. What was surprising was this school's apparent conviction that our feedback would be beneficial. This is not to say, of course, that criticisms were greeted with relish or that every recommendation was followed, but that critiques and advice were encouraged. The program staff were generally quite frank in pointing out what they believed they could and could not do, and the evaluation team found that discussing ideas before making recommendations led to the most useful results. The desire for feedback continued throughout the project.

### Modifying Evaluations to Meet Realities

Evaluators must remember that evaluations serve programs and not vice versa. The painstaking process of describing a program, identifying its goals, and selecting appropriate sources of evaluation data can be undermined by decisions and actions by the school. In the course of this evaluation some data sources were cut off because of local decisions, and some of the evaluation team's major efforts would not help the system in the future because of changes in program design. Program changes are a reality to be faced, and evaluations have to change with them.

### BENEFITS

A number of benefits and/or potential benefits have been identified as accruing to at least three agencies: (a) the school system, (b) the state department as the funding source, and (c) the university.

#### The School System

The major benefits to the school system include the following:

1. Development of a program description and documentation of program functions and components. Through this process several areas where administrative functions and responsibility were unspecified and unclear to parties involved in the program were identified. Also, several recommendations were made relative to administrative structure early enough in the year for consider-

ation in budget proposals and hiring for the coming year.

2. Clearer specification of program goals and objectives. Because the test development process requires considerable delineation of the skills to be assessed, the program staff and evaluation staff were required to carefully review statements of curricular goals as well as specific objectives.
3. Documentation of existing curriculum. Through the development of a mutually agreed upon format for recording information relative to the day-to-day activities of the program (both academic and fine arts), existing activities have been collected and organized. These efforts should provide for greater "transportability" of the program. So often experimental programs only exist in action and it is difficult to disseminate more than the administrative procedures. In this case, there will also be a complete description of the curriculum for the purposes of both dissemination and future program use.
4. Consultation on curriculum development and implementation. The existing curriculum was reviewed and specific strategies were suggested for modifying the curriculum according to current practice in the fields of curriculum and education of the gifted.
5. A system for reporting student progress. Specific reporting systems for the academic and fine arts component of the program were developed through a cooperative effort of the evaluation and project staff.
6. An evaluation plan. The development of a complete evaluation plan should serve not only as a guide for the implementation of the current evaluation project, but also as a guide for continued evaluation efforts after state funding has ceased.
7. A needs assessment for determining administrator attitudes and values concerning gifted and talented students and the current program. Results of this needs assessment suggested that principals from feeder schools indicated that administrators do not have a clear perception of the philosophy and goals of the program or the needs of gifted students. A comparison of responses of the two teachers in the academic program showed very close agreement, but a comparison of these teachers' responses to those of the administrators showed very little agreement on what was happening in the program or what would be happening. This clearly sug-

gested a need for further inservice of personnel outside the project staff.

Other projected benefits to the program include:

1. A set of validated and normed assessment tools to use in assessing the program.
2. A framework for future curriculum development.
3. An information base for program planning and development over the next few years.

#### The State Education Agency

As the funding source, the state education agency should expect benefits from a project which are generalizable beyond the particular system which receives the funds. There should be several specific products associated with this cooperative effort which will be useful to other programs in the state (and perhaps programs in other states). Anticipated benefits to the state will include:

1. A model project with complete documentation of program activities and curriculum. The documented curriculum guide should be useful in guiding others who are in the process of developing programs in either the academic or fine arts areas.
2. A test of thinking process skills that assesses those skills commonly included among the goals and objectives for programs for the academically gifted.
3. Validation of other existing instruments which will provide useful data in the evaluation of other state programs.

#### The University

The university department involved in such a project may realize the following benefits:

1. This project provided training opportunities for students in working on curriculum development, test development, and program evaluation tasks.
2. The faculty members involved had the opportunity to work cooperatively across departments and to make contributions to their fields through the products of the project.

3. Faculty had an opportunity to investigate the relationships between theory and practice, and to improve communication between themselves and practicing professionals.

#### SUMMARY

Through cooperative efforts such as the one described here, programs for exceptional children can realize many benefits for themselves and others. For themselves, they can provide consultation and expertise toward assessing and improving their own programs. For other programs, they can provide materials and products that have been developed and field tested in a manner that brings together theory and practice. For universities, they can provide professors with opportunities to put their ideas into action, and graduate students with opportunities to apply what they are learning to the real world.

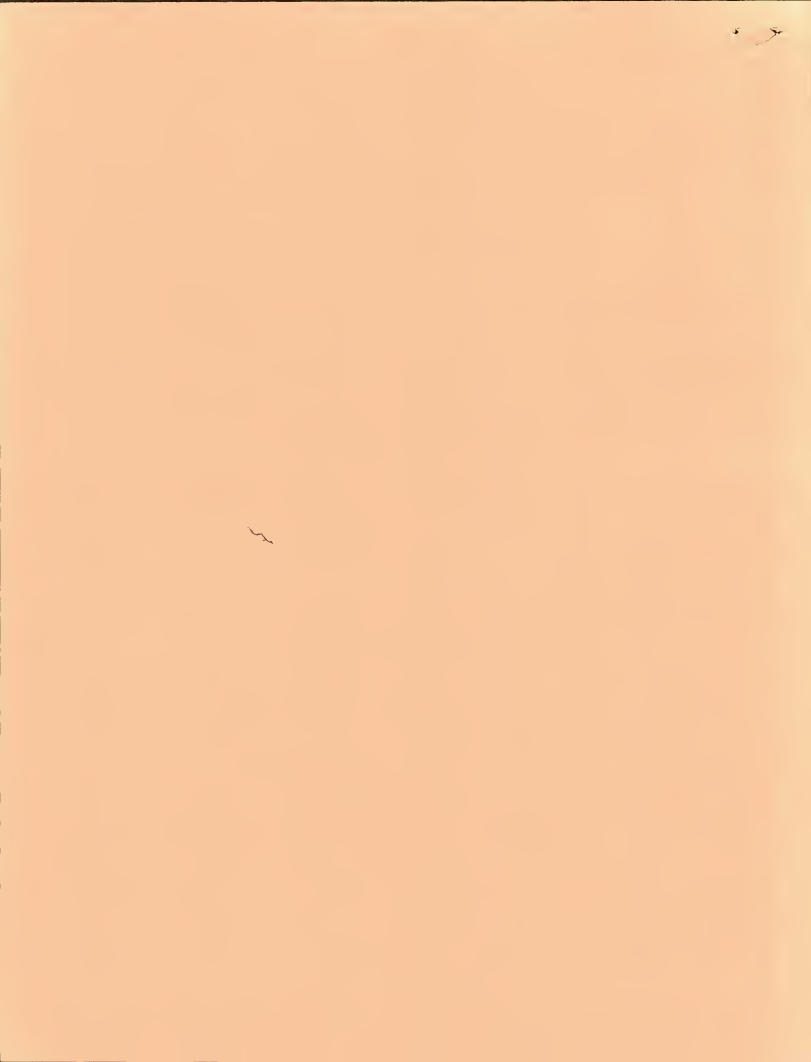
The experiences of the university and school system on this project would suggest that planning of funded efforts should foster cooperation between agencies for the best use of institutional expertise and the most generalizable products.

#### REFERENCES

- Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. *Toxonomy of educational objectives: Handbook I: Cognitive Domoin*. New York: McKay, 1956.
- Cox, G. B. *Managerial style: Implications for the utilization of program evaluation information*. *Evaluation Quarterly*, 1977, 1(3), 499-507.
- Kerlinger, F. M. *The influence of research on education practice*. *Educational Researcher*, 1977, 6, 5-10.
- Provus, M. *Discrepancy evolution*. Berkeley CA: McCutcheon, 1971.
- Ross, J. D., & Ross, C. M. *Ross Test of Higher Cognitive Processes*. San Rafael CA: Academic Therapy, 1976.
- Torrance, E. P. *Torrance Tests of Creative Thinking*. Lexington MA: Personnel Press, 1974.
- Watson, G., & Glaser, E. M. *Critical thinking op-proisol*. New York: Harcourt, 1964.

#### FOR ADDITIONAL INFORMATION ON PROGRAM EVALUATION

PLEASE CONTACT: Nancy Lukenbill, Specialist  
Gifted and Talented Programs, Office of  
Public Instruction, Helena, MT



BIBLIOGRAPHY FOR DISTRICTS BEGINNING A PROGRAM  
FOR GIFTED STUDENTS

---

Baldwin, Alexinia and Wooster, Judith. Baldwin Identification Matrix for the Identification of Gifted and Talented Students. Buffalo, NY, D.O.K Publishers, Inc., 1977.

Method of organizing pupil identification data including a simulation game which guides those participating in identification step by step.

Barbe, Walter B. and Renzulli, Joseph S. Ed. Psychology and Education of the Gifted. (third ed.), Irvington Publisher, 551 Fifth Avenue, New York, NY 10176, 1981.

Birnbaum, Martin, and Others. Ideas for Urban/Rural, Gifted/Talented. (Case Histories and Program Plans). Ventura, CA  
Ventura County Superintendent of Schools Office.

Contains four major elements, one on urban and three on rural education of the gifted. The urban element speaks to an independent studies program in a high school serving large proportions of minority children. The rural element outlines special problems in education of rural gifted, modes of education and techniques for dispersal of opportunity as well as a report on a successful rural cooperative.

Catmull, Joan. Alternative Programming for the Gifted. Tallahassee, FL, Department of Education.

A wide variety of programs are presented with concepts, objectives, pupil selection in talent and academic areas, curriculum and program evaluation.

Clarke, Barbara. Growing up Gifted. Charles E. Merrill Co., Columbus, OH 43216, 1979.

Colargelo, Nicholas and Zaffrann, R. T. (Eds.). New Voices in Counseling the Gifted. Kendall/Hunt Publishing Company, 2460 Kerper Blvd., Dubuque, IA 52001, 1976.

Feldhusen, John and Treffinger, Donald. Teaching Creative Thinking and Problem Solving. Kendall/Hunt Publishing Company, 2460 Kerper Blvd., Dubuque, IA 52001, 1976.

Gallagher, James J. Teaching the Gifted Child. (2d ed.) Boston, Allyn and Bacon, Inc., Link Drive, Rockleigh, NJ 07647, 1975.

This book is an excellent one to have in a personal library as well as professional. It discusses the gifted and creative child's problems, characteristics, how to identify, content for gifted, administration and special problem areas as underachievers and culturally different.

BIBLIOGRAPHY



Gold, Milton. Education of the Intellectually Gifted. C. P. Merrill and Company, Columbus, OH, 1965.

Guilford, J. P. The Nature of Human Intelligence. McGraw-Hill, New York, NY 1967.

Guilford, J. P. Way Beyond the IQ. Creative Education Foundation, Buffalo, NY 1977.

Jordan, June B. and Grossi, J. A. (Eds.) An Administrator's Handbook on Designing Programs for the Gifted and Talented. Council for Exceptional Children, 1920 Association Drive, Reston, VA 22091, 1980.

Kaplan, Sandra N. Providing Programs for the Gifted and Talented: A Handbook. Ventura, CA, Office of the Ventura County Superintendent of Schools, 1974.

An overview of features and procedures for designing and implementing a program for the gifted and talented. This includes worksheets and models.

Keating, D. P. Intellectual Talent: Research and Development. The Johns Hopkins University Press, Baltimore, MD 21218, 1976.

Khatena, Joe. The Creatively Gifted Child: Suggestions for Parents and Teachers. Vantage Press, New York, NY 1978.

Martinson, Ruth A. The Identification of the Gifted and Talented.

Reston, VA, The Council for Exceptional Children, 1975.

Rationale for identification of gifted. Appropriate identification procedures. Gives examples of materials used by various school districts.

Meeker, Mary. Advanced Teaching Judgment, Planning and Decision Making. SOI Institute, El Segundo, CA 1976.

Perspectives on Gifted and Talented Education: Elementary and Secondary Programs for the Gifted and Talented. Teachers College Press, Teachers College, Columbia University, 1234 Amsterdam Avenue, New York, NY 10027.

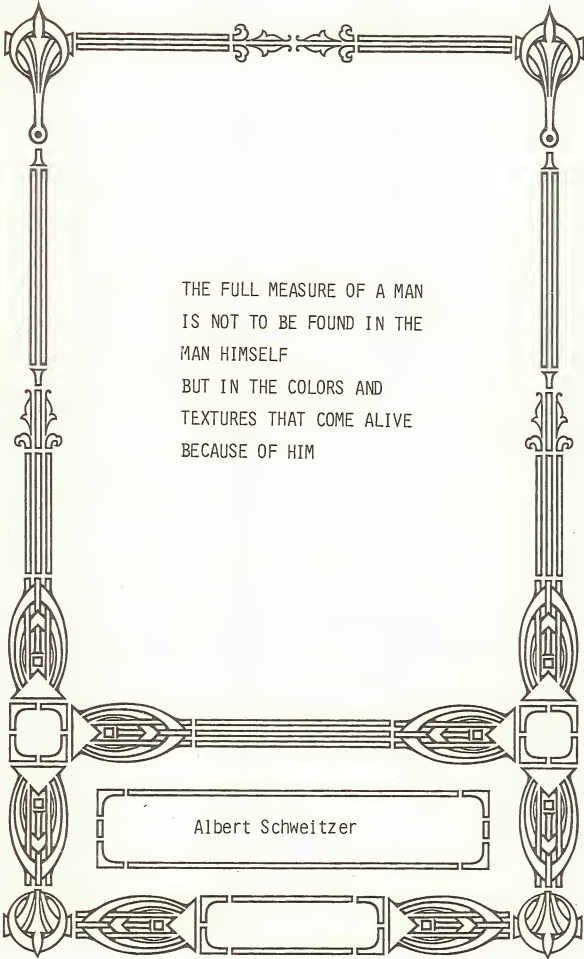
Raths, Louis E. Teaching for Thinking: Theory and Application. Merrill, Charles E. Publishing Co., 1300 Alum Creek Drive, Columbus, OH 43216.

Renzulli, Joseph S. The Enrichment Triad Model: A Guide for Developing Defensible Programs for the Gifted and Talented. Creative Learning Press, P. O. Box 320, Mansfield Center, CT 06250.

Seagoe, M. V. Terman and the Gifted. William Kaufman, Los Altos, CA 1975.

- Stanley, J. C., Keating, D. P. and Fox, Lynn. Mathematical Talent: Discovery Description and Development. The Johns Hopkins University Press, Baltimore, MD 21218, 1978.
- Torrance, E. P. and Myers, R. E. Creative Learning and Teaching. Dodd and Mead Co., 79 Madison Avenue, New York, NY 10016, 1970.
- Tuttle, Frederick B. Jr. and Becker, L. A. Program Design and Development for Gifted and Talented Students. National Education Association, 1201 16th St., Washington, D. C. 20036, 1980.
- Van Tassel-Baska, Joyce. An Administrator's Guide to the Education of Gifted and Talented Children. National Association of State Boards of Education, 444 North Capitol Street, NW, Washington, DC 1981. \$7.50
- Ward, Virgil S. Educating the Gifted: An Axiomatic Approach. Charles E. Merrill, Columbus, OH 43213, 1961.
- Westco Manual. Northwest Clearinghouse for Gifted Education, Education Service District #121, 1410 S 200th Street, Seattle, WA 98148, 1982.
- A well-organized manual of resource materials that was designed for consultants and coordinators of gifted programs. \$30.00
- Whitmore, Joanne Rand. Giftedness, Conflict, and Underachievement. Allyn and Bacon Inc., 470 Atlantic Avenue, Boston, MA 02210.





THE FULL MEASURE OF A MAN  
IS NOT TO BE FOUND IN THE  
MAN HIMSELF  
BUT IN THE COLORS AND  
TEXTURES THAT COME ALIVE  
BECAUSE OF HIM

Albert Schweitzer





